interlogix
A UTC Fire & Security Company

TruVision DVR 40 User Manual

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Product overview

Product description

The second generation of TVR 40 uses H.264, the latest video compression standard. This standard offers 25 frames per channel per second at CIF resolution. This compression technology delivers compact but excellent quality images.

The TruVision DVR 40 offers 4, 8 or 16 channels of analog recording, all up to 4CIF resolution (704 x 576). The dual streaming functionality allows the user to set up different settings for recording and streaming video. TVR 40 supports both variable bit rate and variable frame rate. The dual streaming functionality allows the user to set up different settings for recording and streaming video. TruVision DVR 40 incorporates Triplex functionality for simultaneous transmitting, viewing live video, and recording.

The TruVision DVR 40 series embedded digital video recorder is a digital surveillance product. It uses an embedded microcontroller TVR 40 (MCU) and an embedded real-time operating system (RTOS), combining the most advanced technology in the information industry, such as video and audio encoding/decoding, hard disk recording, and TCP/IP. The firmware is burned into the flash, making it more stable and reliable.

TruVision DVR 40 series has the features of both a digital video recorder (DVR) and a digital video server (DVS). It can be used as a standalone device but also to build a powerful surveillance network, such as widely used in the banking, telecommunications, manufacturing, and transportation sectors.

Unpacking the TruVision DVR 40 and its accessories

When you receive the product check the package and contents for damage, and that all the items are included. There is an item list in the package. If any of the items are damaged or missing, please contact your local supplier.

Figure 1: Items shipped with product

AC mains cable

Quick Start Guide

IR remote control

AAA batteries

USB mouse

USB extension cable

RS-232 cable

CD with documentation & utilities

Installation environment

Ventilation: Do not block any ventilation openings. Install in accordance with the manufacturer's instructions. Ensure that the location planned for the installation of the unit is well ventilated. Regularly clean the unit by gently brushing it.

Temperature: Consider the TruVision DVR 40's operating temperature (-10 to 50°C) and non-condensing humidity specifications (10 to 90%) before choosing an installation location. Extremes of heat or cold beyond the specified operating temperature limits may cause the TruVision DVR 40 to fail. Do not install the unit on top of other hot equipment. Leave space between rack mounted units.

Moisture: Do not use the unit near water. Moisture can damage the internal components. To reduce the risk of fire or electric shock, do not expose this unit near to rain or moisture.

Chassis: Other equipment may be placed on top of the unit if it weighs less than 16 kg.

WARNING: Before installing the unit, please ensure that the power to the unit is switched off.

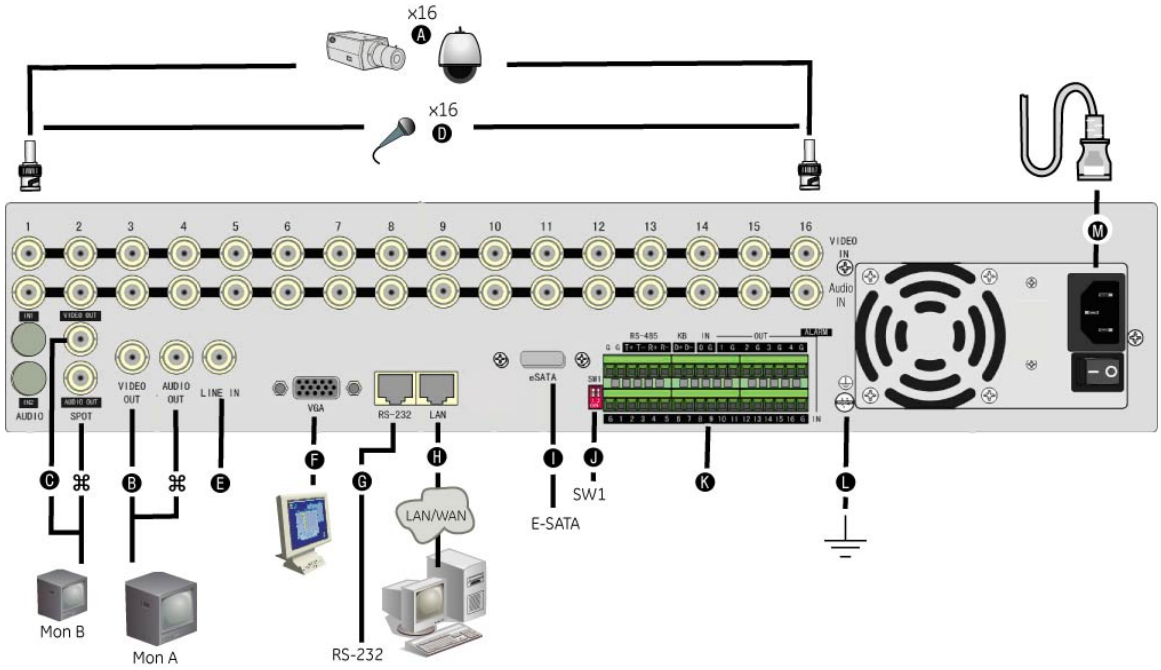
Installation

This section describes how to connect the TruVision DVR 40 unit.

Connecting the devices

Figure 2 shows the back panel connections and describes each connector. There are variations between the different model types.

Figure 2: TruVision DVR 40 back panel connections (16-channel model shown)



Required connections

A. Connect up to 16 cameras to the standard BNC video inputs.

   Note: If a camera is incorrectly connected to the TVR 40, the monitor shows a Video Loss message. Check the connection and reconnect the camera if necessary.

B. Connect monitor A (main) to the output VIDEO OUT. Connect the audio output (⌘) to AUDIO OUT if required. You can use either analog or VGA output. Both outputs will display the same video information.

Optional connections

C. Connect a spot monitor (Mon B) to the TVR 40. Connect the monitor video to VIDEO OUT. Connect the monitor audio (if used) to AUDIO OUT (⌘).

D. Connect up to 16 audio signals to the standard BNC audio inputs (315 mV).

E. For future use.

F. Connect the VGA display (max. 1024 × 768 @ 60 Hz).

G. Connect an ATM or optional ProBridge using the supplied RS-232 cable.

H. Connect the network devices.

I. Connect the E-SATA for archive and storage expansion.

J. Terminate the line using this RS-485 switch. The default setting is OFF.

K. Connect the external data and alarm input/output (I/O) cable. See Figure 3 on page 4 for more information.

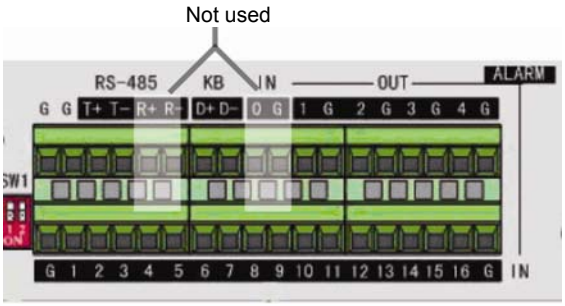
L. Connect the TVR 40 to ground.

Power connection

M. Connect the power cord to the TVR 40. Be sure all devices are connected and turned on before you turn on the TruVision DVR 40.

Connecting alarm inputs and outputs

Figure 3: Connecting the external data and alarm I/O cable



RS-485 T+ T-: Connect the PTZ camera

KB D+/D-: Connect keypad

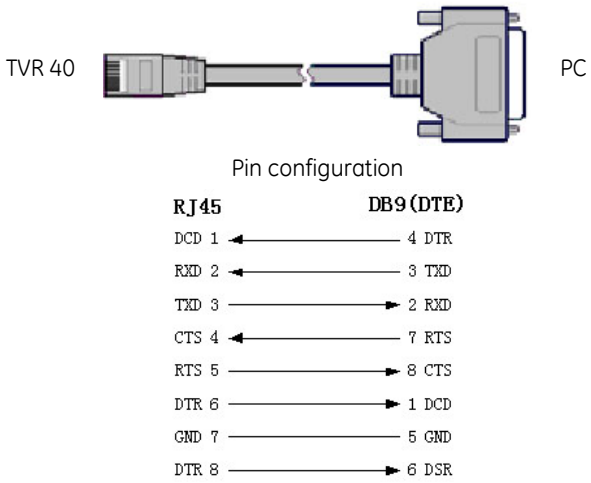
Alarm output port:
1-G to 4-G: 4 relay ports

Alarm input port:
G: Common ground)
1 to 16: Alarm inputs, NO/NC supported

Connecting the TVR 40 to a PC

Use a RS-232 cable to connect the unit to a PC. Figure 4 describes the pin connections to use when connecting the serial port of the TVR 40 to a device using a DB9 connector such as on a PC.

Figure 4: The pin connections of a RS-232 cable



Setting up a PTZ dome camera

Use the USB mouse provided or the optional KTD-405 keypad for local telemetry control. If using the TVR 40 over a network, use the web browser to control the PTZ dome cameras.

The supported protocols are: GE, Pelco-D, and Pelco-P

For information on setting up the PTZ protocols and presets, see “PTZ settings” on page 86.

Connect a TVR 40 to a PTZ dome camera and keypad

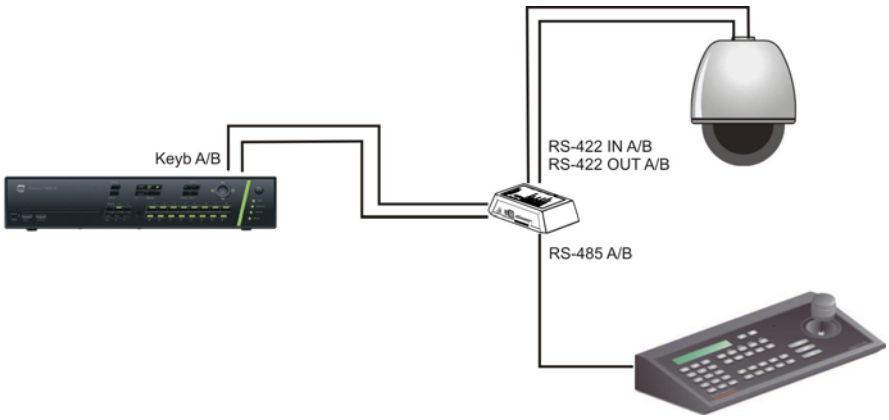
Use the input/output box that is supplied with the keypad to connect a keypad to the TVR 40. The keypad can be connected to a PTZ camera for local control or for control over the network.

Local control of PTZ dome camera

If you simply want to configure a PTZ dome camera using a keypad, connect the keypad as shown in Figure 5 below. This setup only functions with the supported PTZ cameras listed in Figure 5 below. Third-party PTZ cameras are not supported.

This setup does not let you control or configure the PTZ dome cameras using the DVR front panel, remote control, Web browser or remote software. However, it can be useful to use as a temporary setup in order to fully configure the PTZ cameras to meet customer requirements. Once the camera installation is complete, rewire the setup for control over the network. (see Figure 6 on page 6). The PTZ dome cameras can then be controlled using the DVR front panel, remote control, Web browser or remote software.

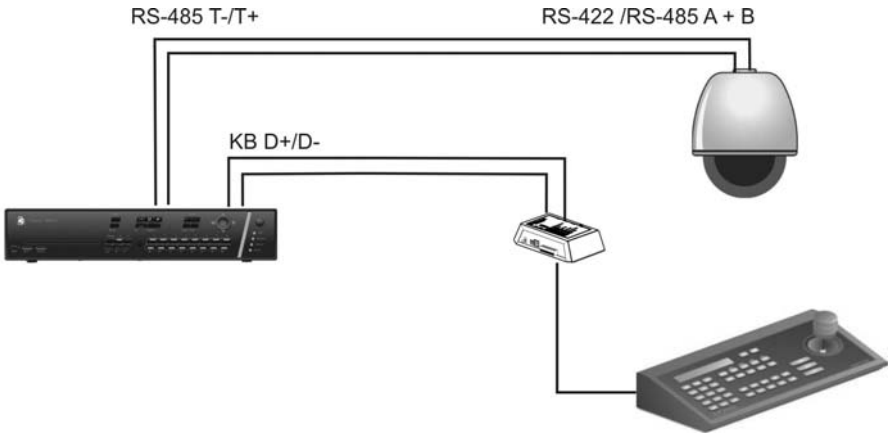
Figure 5: Connecting a keypad to the TVR 40 for local control of a PTZ dome camera



Network control of PTZ dome camera

This is the preferred setup (Figure 6 on page 6.) Any PTZ dome camera to be controlled as the DVR is doing the PTZ protocol translation. However, this setup provides only limited dome configuration.

Figure 6: Connecting a TVR 40 to a PTZ dome camera



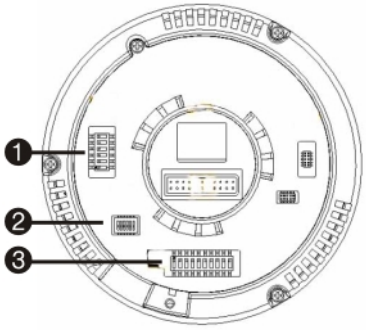
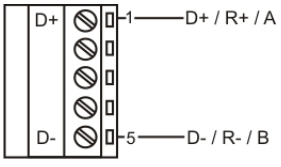
Connection		Serial port TVR 40
I/O box from keypad:	White	D+
	Yelow	D-
PTZ camera:	RS-422/RS-485 A	T+
	RS-422/RS-485 B	T-

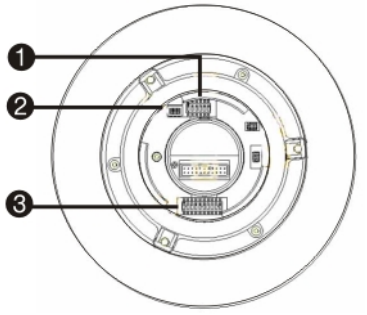
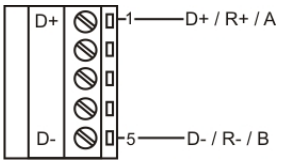
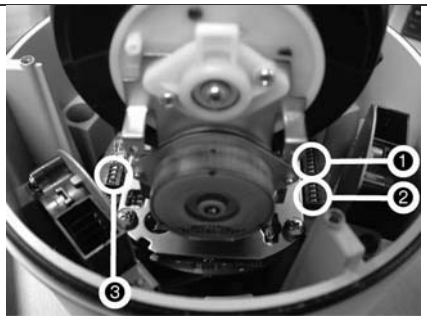
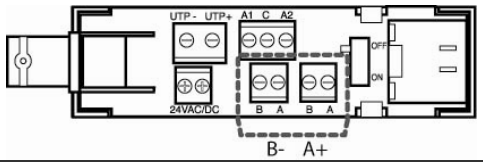
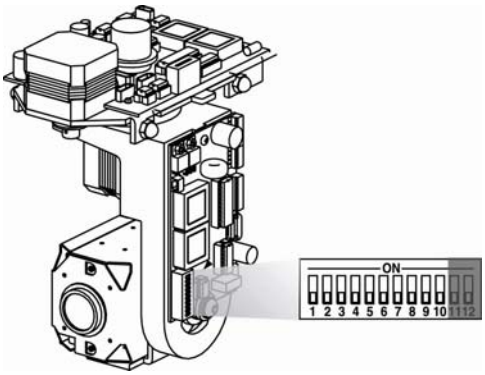
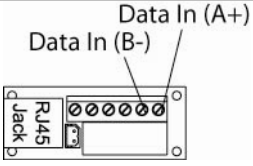
Configure the PTZ protocols for Interlogix cameras

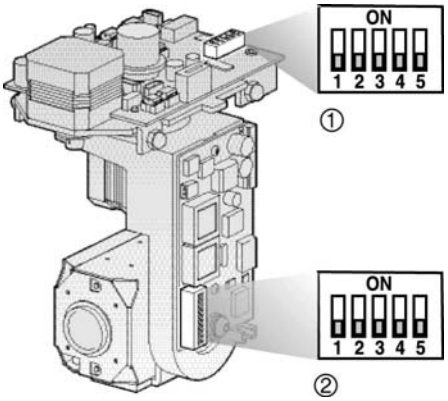
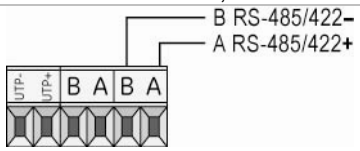
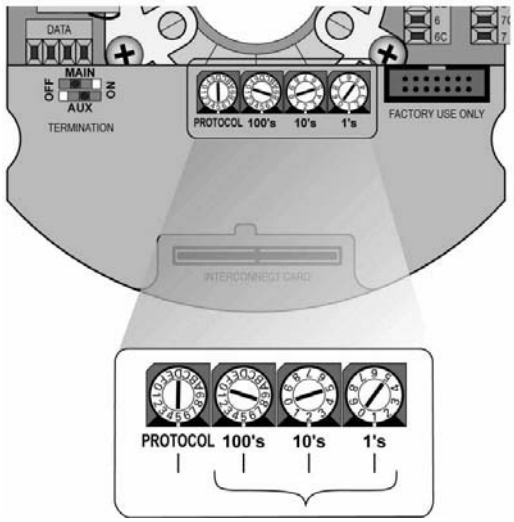
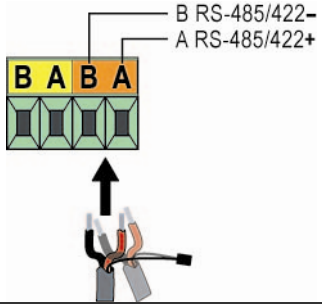
Before the PTZ cameras are assembled in their housings, set their protocol and address DIP switches for the TVR 40. See Table 1 below for the different Interlogix PTZ camera configurations.

If you are using PTZ cameras from another company, please refer to their configuration instructions.

Table 1: Configuring Interlogix PTZ cameras

Camera	Switch setting		
TruVision Mini Dome 12X PTZ: Indoor Dome	Protocol DIP switches:	000000	 1. Protocol DIP switches; 2. RS-485 communication DIP switches; 3. Camera ID DIP switches
	RS-485 communication DIP switches:	0000000000	
	Camera ID DIP switches:	Select the camera ID DIP switch address as required	
	RS-485 data connector:		

Camera	Switch setting		
TruVision Mini Dome 12X PTZ: Outdoor Dome	Protocol DIP switches:	000000	 1. Protocol DIP switches; 2. RS-485 communication DIP switches; 3. Camera site ID DIP switches
	RS-485 communication DIP switches:	0000000000	
	Camera site ID DIP switches:	Select the camera ID DIP switch address as required.	
	RS-485 data connector:		
TruVision Dome 16X PTZ	Protocol DIP switches:	0111	 1. Address switches; 2. Baud switches; 3. Protocol switches
	Address DIP switches:	Select the camera ID DIP switch address as required.	
	Baud rate:	0000	
	RS-485 data connector:		
CyberDome	Protocol switches:	NA	
	Address switches:	Select the camera ID DIP switch address as required.	
	RS-485 data connector:		

Camera	Switch setting		
UltraView PTZ	Protocol switches:	01000	 1. Protocol switches; 2. Address switches
	Address switches:	Select the address switch address as required.	
	RS-485 data connector:		
Legend	Protocol switches:	5	
	Address switches:	Select the camera ID DIP switch address as required.	
	RS-485 data connector:		

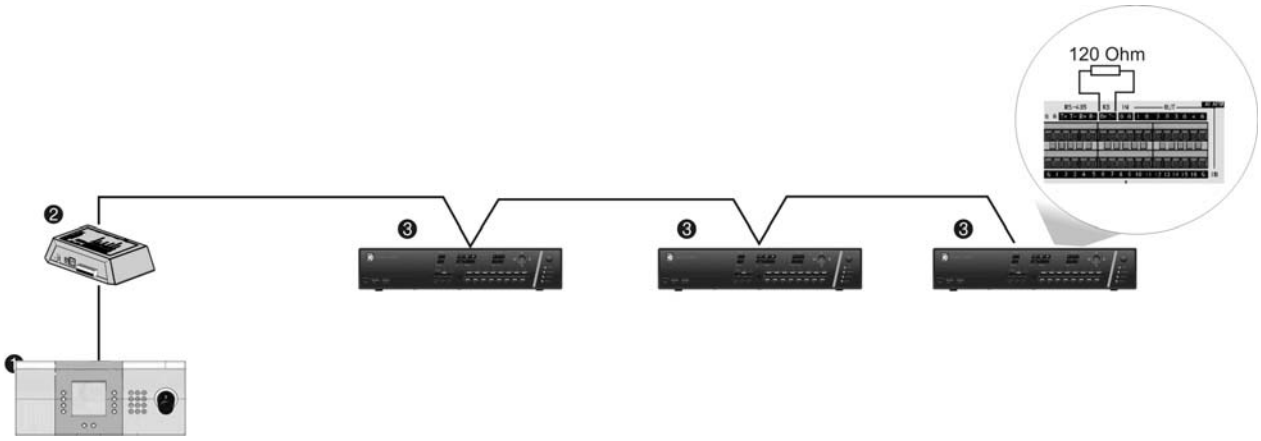
Wiring the TVK-505U keypad

The keypad uses RS-485 simplex wiring. The signal is transferred by a single twisted pair line. An unshielded CAT5 network cable is recommended for normal applications. Use a shielded CAT5 cable if the cables could be exposed to interference.

The maximum number of devices that can be installed in one bus is 255, with a maximum cable length of 1200 m. The cable length can be expanded using a signal distributor.

Both the first and the last device in series should be terminated with 120 Ohm resistance to minimize line reflections. See Figure 7 below.

Figure 7: RS-485 bus serial wiring



1. Keypad; 2. I/O box; 3. TVR 40

Monitor connections

Connect the unit to the monitors via 75-ohm video coaxial cables with BNC connectors. The unit provides a 1 Vpp CVBS signal.

Controlling the TVR 40

There are four ways to control the TVR 40 menu options:

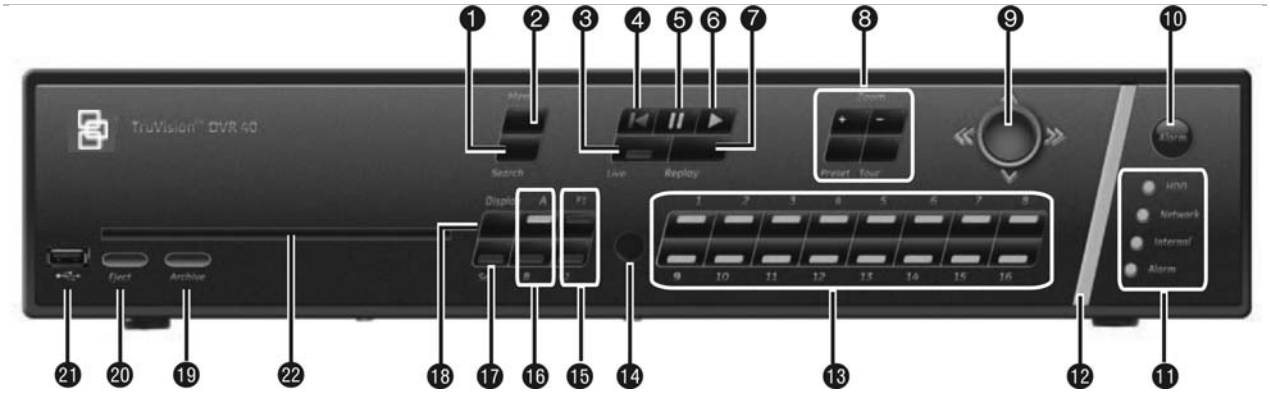
- Front panel control
- IR remote control
- Mouse control
- Web browser control

These options are described in the following sections.

Using the front panel

The buttons on the front panel control all functions. The LED indicators light up or flash to alert you to various conditions. The functions available can be limited by setting passwords. See Figure 8.

Figure 8: Front panel



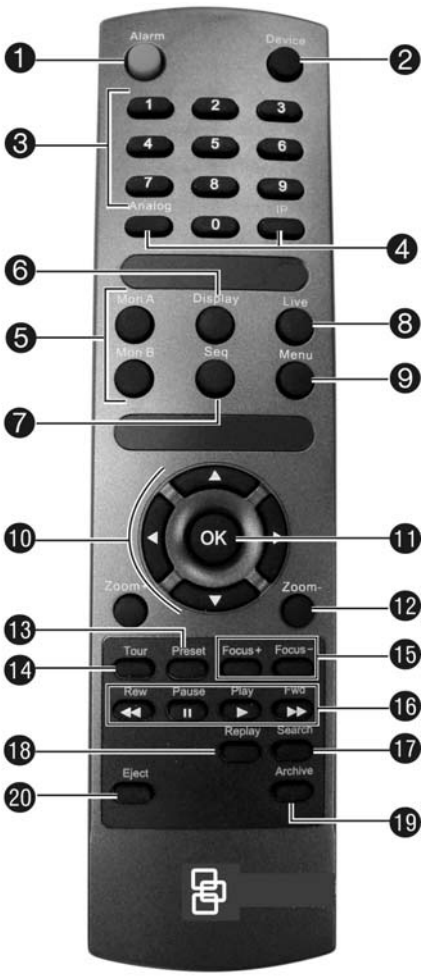
Item	Name	Description
1.	Search	Press to open the Playback menu to search for and playback recorded videos.
2.	Menu	This button has several functions depending on the operation used. **In Live mode:** Press to open the Main menu. **In menu mode:** If an edit box of a menu option is selected, press the button to exit the option. If a check box or list box of a menu option is selected, press the button to exit the option and return to the Main menu. Press again to return to live mode. Any changes made will not be saved.
3.	Live	Press to return to live mode.
4.	Playback	Press to playback the oldest file in the system.
5.	Playback Pause	Press to pause playback.
6.	Instant Playback	Press to playback the most recent three minutes of video recorded.
7.	Replay	Press to playback current file.
8.	PTZ Control	Displays the PTZ control of the selected camera, if PTZ is supported. **Zoom +/-**: Press to zoom camera image in and out. **Preset**: Select a pre-programmed Preset option. **Tour**: Select a pre-programmed Shadow Tour option.

Item	Name	Description
9.	Trigger-point joystick	Use to select options in a menu and to control playback. Press for Enter. LED arrows are lit when the jog is active. **In live mode:** Press to enter PTZ mode. **In menu mode:** Move the joystick left/right and up/down to position cursor in menu screen. Press for Enter. **In PTZ mode:** Move the joystick left/right and up/down to position cursor in menu screen. Press for Enter. **In playback mode:** Move left: Decrease speed. Move right: Increase speed. Move up: Jump forwards 30 seconds. Move down: Jump backwards 30 seconds.
10.	Manual Alarm	Press to manually acknowledge an alarm.
11.	Status LEDs	**HDD**: Green – Hard drive is working correctly. Red – Fault. **Network**: Green – Network working correctly. Red – Fault. **Internal**: Green – Device is working correctly. Red – There are internal errors. **Alarm**: Green – No external alarm. Red – indicates an external alarm status.
12.	Alarm indicator	Flashes red when there is an alarm.
13.	Cameras	Each camera has its own numeric button. No light - Camera is disabled. Green - Connected and working correctly Red (flashing) - Camera is in alarm mode. Red (steady) - Video loss.
14.	IR remote receiver	This is the receiver for the IR remote control.
15.	F1 / F2	Press to select F1 or F2 functions. The functions vary depending on the operation used such as: - Select displayed time format. - Archive recordings or specific segment of a recording. - Select motion detection and privacy mask zones on-screen.
16.	Monitor selection	Press to toggle between monitors A and B.
17.	Seq	Press to sequence cameras in live mode.
18.	Display	Press to view multiscreen format.
19.	Archive	Press to open the Search Archive menu.
20.	Eject	Push to eject CD-ROM from the drive.
21.	USB	Insert USB device such as a mouse or storage media.
22.	DVD slot	Insert CD or DVD disk.

Using the IR remote control

The IR remote control operation is similar to the front panel operation.

Figure 9: Description of the IR remote control



Item	Description
1. Alarm	Acknowledge an alarm.
2. Device	Enable/disable the IR remote control to control the TVR 40.
3. Numeric buttons	Select a camera, and enter a number in a menu option.
4. Analog and IP	Analog is equivalent to FI, and IP to F2, on the front panel.
5. Mon A and Mon B	Toggle between monitors A and B.
6. Display	Toggle between the multiscreen views.
7. Seq	Start /stop sequencing.
8. Live	Return to live mode.
9. Menu	Activate the main menu.
10. <, >, ^, v	In Menu mode: Use left or right arrow buttons to select and up or down arrow buttons to edit entry. In PTZ mode: Use to control PTZ. In Playback mode: Use to control playback speed.
11. OK	Confirm selection.
12. Zoom + and -	Use to control zoom of camera lens.
13. Preset	Enter preprogrammed three-digit code to call up a preset.
14. Tour	Enter preprogrammed three-digit code to call up shadow tour.
15. Focus + and -	Use to control focus of camera lens.
16. Playback control	Use to control playback (Rewind, Pause, Play, and Fast Forward).
17. Search	Open the Search menu.
18. Replay	Replay the selected file from the beginning.
19. Archive	Open the Quick Archive menu.
20. Eject	Eject the CD or DVD disk.

To insert batteries into the IR remote control

1. Remove the battery cover on the IR remote control.
2. Insert the batteries. Observe the correct battery polarity (+ and -).
3. Replace the battery cover.

To connect the remote control to the TVR 40

1. Press the Device button on the IR remote control.
2. Enter the device ID. The TVR 40 default ID is 1.

Note: See “Setting the device ID” on page 43 for information on how to change the device ID.

To disconnect the IR remote control

1. Press the Device button on the IR remote control. It cannot now be used to operate the DVR.

When the IR remote control does not function properly

- Check the battery polarities
- Check that the batteries are sufficiently charged
- Check that the IR remote control sensor is not masked

If the problem persists, please contact your local supplier.

Using the mouse

Use the USB mouse provided with the TVR 40. It can carry out the same operations as the front panel and remote control.

Connect the mouse to the DVR by simply plugging the mouse USB connector into the USB port on the TVR 40. The mouse is immediately operational.

To use the mouse in live mode

Scroll forwards and backwards between cameras: When in full-screen mode use the scroll button on the mouse to scroll forwards and backwards through the cameras.

Toggle between full-screen and multiview: When in multiview double-click the left button of the mouse on a camera to open it in full-screen view. Double-click again to return to multiview.

To access the mouse control menu

In live mode right-click the mouse to open its control menu. It has eight menu options, which are listed in Table 2.

Table 2: Mouse control menu

Menu option	Description
Menu	Jump to the main menu.
Camera	Select a specific individual camera.
Multi Screen	Select multiview. The multiview selection presented depends on the number of cameras connected to the TVR 40.
PTZ Control	Control a PTZ camera. See Table 4 on page 35 for the description of the PTZ control icons. Right-click the mouse to get the following options: • Channel: Select the camera to control • Preset: Select a preset number to use • Exit: Return to live mode

Menu option	Description
Instant Replay	Get an instant replay of the last five minutes recorded from all cameras in either full-screen view or multiview. See section ""Playback recorded video" on page 30 for more information. During the playback right-click the mouse to jump to the Playback menu.
Search	Jump to the Playback menu. See "Searching and playing back recorded video" on page 27. Select for recordings with specific criteria, such as particular camera, type of event, time, and text. Right-click the mouse to return to live mode.
Manual Record	Manual Record menu screen appears. See "Manual recording" on page 25.
Status Bar	Toggle the on-screen status bar on/off.
Swap Monitor	Toggle between monitors A and B.

Using the Web browser

This section describes how you can use the Web browser interface to configure the device, playback recorded video, search through event logs, and control a PTZ dome camera.

Windows Vista and 7 users

Internet Explorer for Windows Vista and Windows 7 operating systems have increased security measures to protect your PC from any malicious software being installed. When using the TVR 40 Web browser interface, you can install ActiveX controls to connect and view video using Internet Explorer.

To have complete functionality of the Web browser interface and the DVR player with Windows Vista and Windows 7, do the following:

- Run the browser interface and the DVR player application as an administrator in your workstation
- Add the DVR's IP address to your browser's list of trusted sites

To add the DVR's IP address to Internet Explorer's list of trusted sites

1. Open Internet Explorer.
2. Click Tools, and then Internet Options.
3. Click the Security tab, and then select the Trusted Sites icon.
4. Click Sites.
5. Clear the "Require server verification (https:) for all sites in this zone" box.
6. Enter the IP address or DDNS name in the "Add this website to the zone" field.
7. Click Add, and then click Close.
8. Click OK in the Internet Options dialog screen.
9. Connect to the TVR 40 for full browser functionality.

Accessing the Web browser

To access the TVR 40, open a Web browser and enter the IP address assigned to the TVR 40, as a Web address. On the logon screen, enter the default user ID and password.

Note: Only one DVR can be viewed per browser.

User ID: admin

Password: 1234

The Web browser uses the following ports.

- IP address - 192.168.1.82
- Subnet mask - 255.255.255.0
- Gateway address - 192.168.1.1
- Video Port: 8000
- HTTP Port: 80

Web browser overview

The TVR 40 Browser lets you easily view, record, and playback video as well as manage all aspects of the system from any Internet location. It has easy-to-use controls that give you quick access to the functions you require. See Figure 10 below for the layout.

You can also specify settings on the Web browser interface to optimize video playback and recording performance when operating in a low or limited bandwidth environment

Figure 10: TVR 40 Browser layout (Live mode shown)

A. **Viewer:** View live and recorded video.
B. **Navigation bar:** Access live and playback video. Explore the TVR 40 internal log, and carry out comprehensive remote maintenance.
C. **Navigator:** Access all TVR 40 cameras.
D. **Viewer controller:** View or edit the properties of the currently selected objects in the Navigator.
E. **Camera controller:** Control PTZ cameras or edit properties of the currently selected cameras.

Using the Web browser to configure the device

Click Config on the menu bar to display the configuration screen. There are two ways to configure the DVR: Local and Remote.

Local configuration

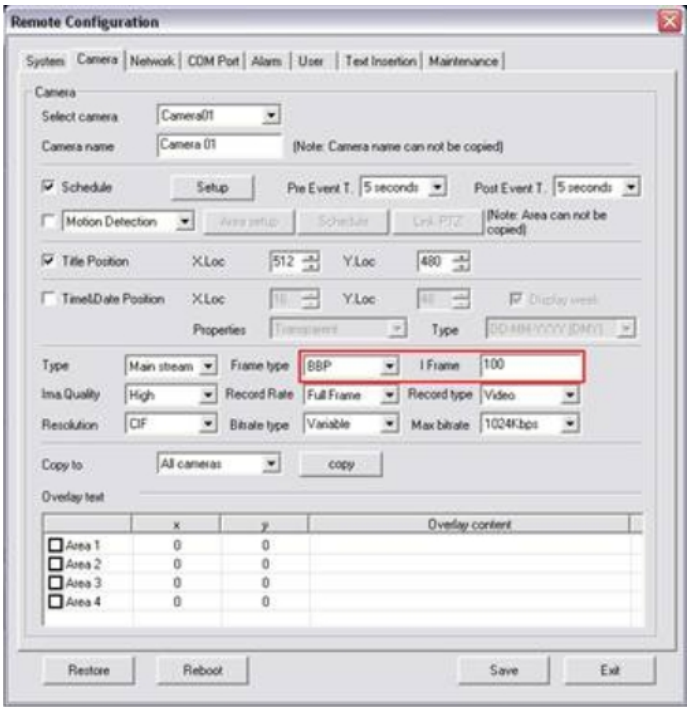
Local configuration lets you define communication and network parameters such as protocol type, maximum file size, stream type, network transmission settings. You can also specify the directory locations for saving recorded and playback video, captured images, and downloaded files.

Remote configuration

Remote configuration lets you remotely configure the following DVR settings:

Note: The configuration settings defined remotely are different from those that can be defined locally.

Figure 11: Remote browser configuration screen (Camera screen shown)



Caution: You can adjust the frame type and I-frame ratio of the camera streaming configuration (see the boxed area in Figure 11). However, these settings have a direct impact on the recorded video quality and streaming behavior. Changing the factory default settings can result in loss of streaming performance and poor video quality. It is strongly recommended that these factory default values are not changed.

- DVR information including device name, number, and display scale
- Camera settings including motion detection, privacy masking, video loss, video tampering, video image display settings, and text overlay
- Recording settings including recording schedule and recording quality
- Network settings including, e-mail, DDNS, and NTP setup
- Serial port settings including RS-485 and RS-232 parameters

- Alarm settings including alert notifications, audio alerts, pre-alarm, and post-alarm seconds, and notification parameters
- System settings including, user management system date and time, audio, RS-485, RS-232, language, and hard drive setup

The remote configuration screen also lets you remotely upgrade the DVR firmware. See Figure 11 on page 18.

Basic operations

This chapter describes the everyday usage of the TVR 40. It explains:

- Turning on the TVR 40
- Login using PINs
- Live mode
- Full and multiscreen mode
- Manual recording
- Searching and playing back video
- Archiving recorded files
- Controlling a PTZ camera
- Overview of the menu structure
- Turning off the TVR 40

Turning on the TVR 40

The TVR 40 is delivered with preconfigured settings. You only need to connect at least one camera and monitor. After powering up, the TVR 40will start to record immediately.

Note: The default video standard is PAL. For information on changing the standard, see section ““Selecting video standard” on page 44.

The TVR 40 is equipped with a universal power supply that will auto-sense 100/240 V, 60/50 Hz.

Turn on the connected equipment. When you turn on the TVR 40 it automatically displays all connected cameras. The TVR 40 shows the number of HDDs installed then displays live mode from each connected camera. It automatically begins recording.

To get the unit into operation quickly

1. Connect all the devices required to the back panel of the TVR 40. See Figure 2 on page 3.
2. Turn on the unit. The unit automatically carries out a diagnostic test of the devices. The video images then appear on-screen.
3. To modify the preconfigured settings, press the Menu button on the front panel to access the main menu. The login dialog screen appears.

4. Enter the default administrator user ID and PIN. The main screen appears.

   User ID = admin
   PIN = 1234

5. Modify the TVR 40 parameters as required in the submenus.
6. When customization is complete, press the Menu button until live mode appears.

Logging in using PINs

Use PINs to limit access to the TVR 40. Only authorized users should be able to modify menu settings or carry out certain tasks. For further information on managing users, see section “User settings” on page 91.

Note: You will hear an audible warning when an incorrect user name or PIN is entered. After three incorrect entries, the unit returns to live mode.

Live mode

Live mode is the normal operation of the unit where you watch live pictures from the cameras. The TVR 40 automatically enters live mode when powered up. From live mode you can switch to playback mode or to the system menu.

The way the monitors display video depends on how you have set up the system.

In live mode the TVR 40 displays the status of each video channel at the bottom of the screen. See Figure 12 on page 23. The number of channels displayed (4, 8, or 16) depends on the TVR 40 model.

Figure 12: Example of live mode with recording status displayed (for 16 cameras)

The monitor is inactive if the letter is grey

Caution: TVR 40 has no camera autodetection mode. The unit records a channel even if no camera is connected to it. A black picture with the message "Video Loss" is displayed when the channel is selected in either live mode or playback mode.

The color of the camera numbers displayed in the status bar represents the channel status. It is consequently easy to see the current status of each channel during live mode. The status color code is described in Table 3.

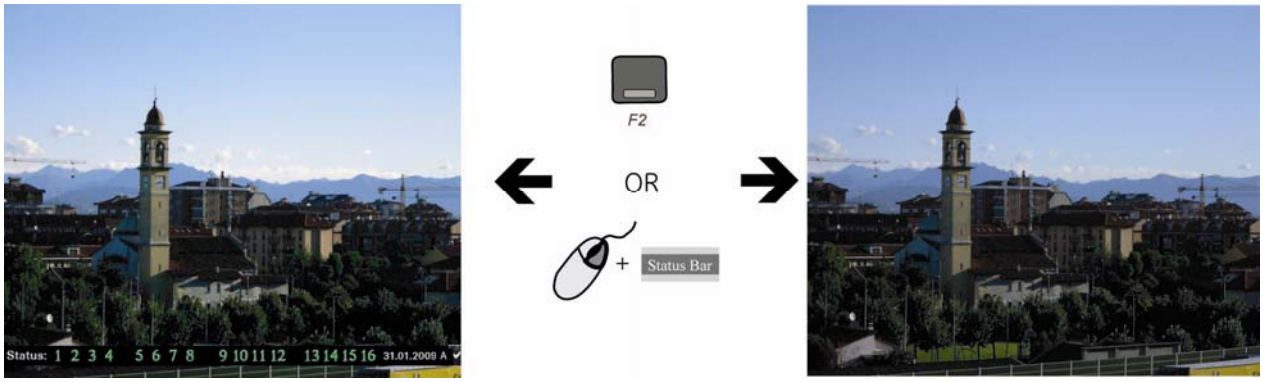
Table 3 Description of the status color code

Icon	Icon color	Status description
1	Blue	No video signal
1	Yellow	Camera tampered
1	Grey	Recording disabled
1	Green	Real time recording
1	Orange	Motion detection
1	Red	External alarm

The status bar can be set to appear by default. See “Displaying the status bar” on page 43.

To activate/deactivate the on-screen status bar

Front panel/remote control	Press the F2 button on the front panel to activate or deactivate the status bar.
Mouse	Right-click the mouse and select *Status Bar* from the menu.



Selecting a monitor

The TVR 40 can be connected to up to two monitors. However, only one monitor can be controlled at a time. You can select from which monitor to display the camera views in live mode.

To switch between monitors A and B

Front panel	Press buttons A or B to switch between monitors A and B.
IR remote control	Press buttons Mon A or Mon B to select between monitors A and B.
Mouse	Right-click the mouse and select *Swap Monitor* from the menu shown.

Viewing in multiscreen

The 16-channel TruVision DVR 40 User Manual has five multiscreen display formats available including full screen. The eight-channel TruVision DVR 40 User Manual has four multiscreen display formats.

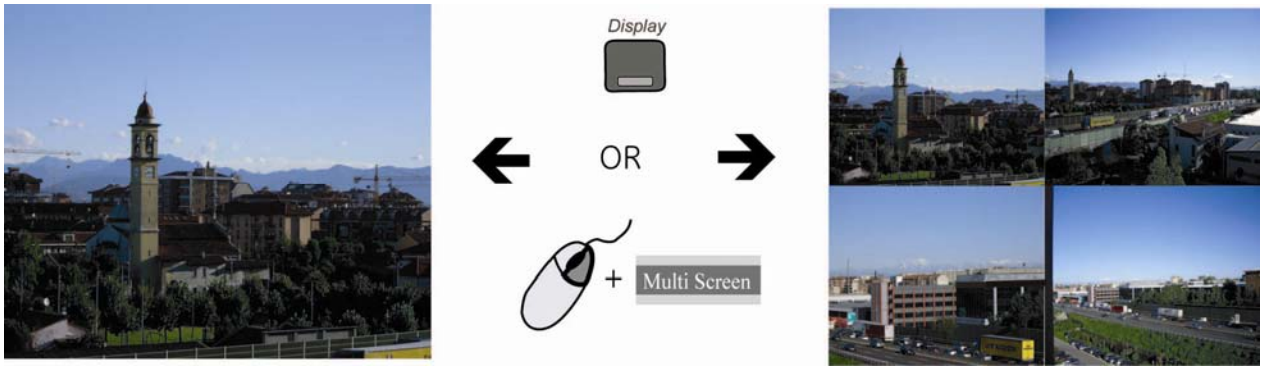
A cameo is any cell in a multiscreen display. A camera picture can only be shown in one cameo at a time. To change the order of cameras in the cameos, see “To setup multiscreen and dwell time” on page 46”.

To view a full screen display

Front panel	Press the numeric button that corresponds to the camera number. For example, press button 10 to preview camera number 10.
IR remote control	Press two number buttons that corresponds to the camera number. For example, press buttons 0 and 2 to preview camera number 02.
Mouse	Right-click the mouse and select *Camera* from the menu shown. Select the camera required.

To view a multiscreen display

Front panel/ IR remote control	Press the Display button to switch to multiscreen live mode. If the multiscreen display does not include all the cameras required, keep pressing the Display button to increase the number of screens displayed.
Mouse	Right-click the mouse and select *Multi Screen* from the menu. Select the desired multiscreen display layout.



To manually cycle through live mode

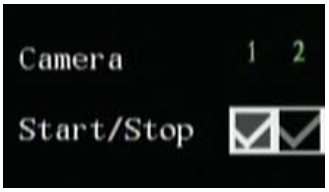
Front panel/ IR remote control	Press the Seq button to manually step through the live modes. You can set the auto multiscreen mode in the Display menu. See section “Multiscreen and sequencing” on page 46 for further information.
Mouse	Use the mouse wheel to scroll forwards and backwards through the live modes.

Manual recording

When a channel is recording, its corresponding camera LED on the front panel is green. This recording status is also repeated in the Manual Record menu.

Manually start or stop a channel recording from the Manual Record menu. This menu is only accessible using the mouse.

What the status options mean in the Manual Record menu



When the status of the camera number is:

- **Green:** Indicates the channel is recording
- **Red:** Indicates remote viewing
- **Orange**: Indicates both recording and remote viewing
- **Grey**: Indicates the channel is not recording

Start/Stop options:

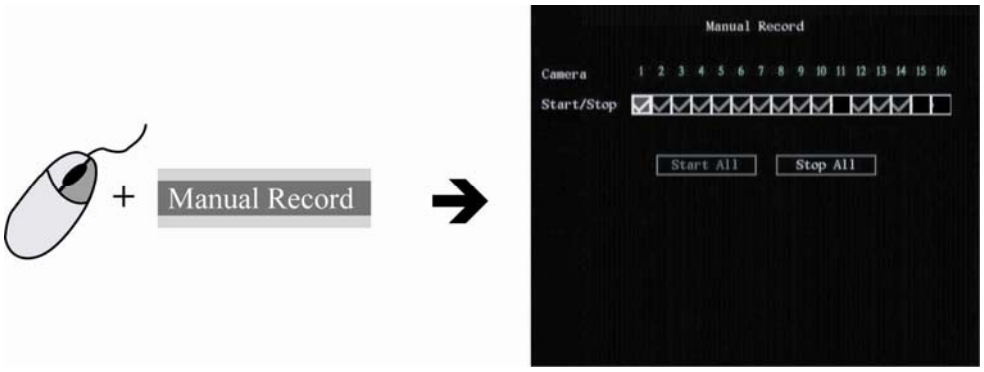
- ✓ : Indicates recording is enabled

To manually start or stop a recording

1. Right-click the mouse and select the option *Manual Record*. Enter your user name and PIN, if requested.

   Note: You must have Record rights to change the manual recording status. See "Modifying operational rights" on page 94 for more information.

   The Manual Record screen appears. All channels are listed. The Camera line shows the channels that are currently recording. In the example below, 13 of the 16 channels are recording.



2. On the Start/Stop line activate or deactivate a channel by press Enter or left-click the mouse to activate (✓) a channel that is not recording. Press or click again to de-activate.

   The camera status LED on the front panel, and the camera number in the status bar on-screen in live mode, turn green.

3. Select the next channel from which you want to start or stop recording.
4. If you want all channels to start recording, select *Start All.* All the channel status LEDs on the front panel and the on-screen camera numbers in the status bar turn green.

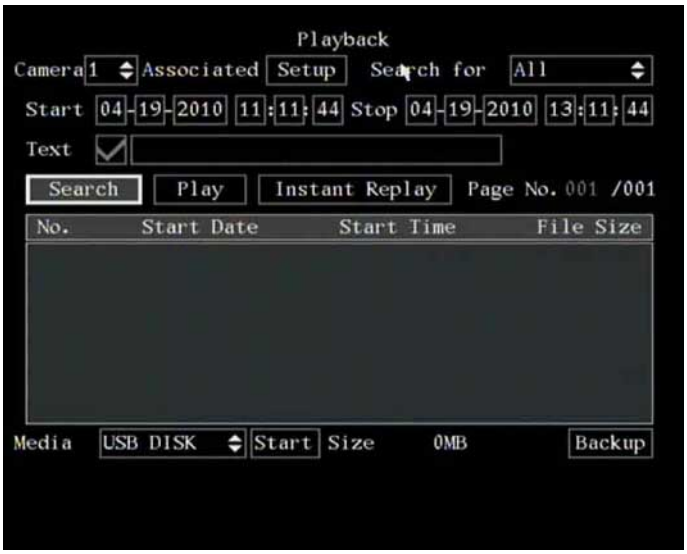
   Select *Stop All* to switch off all channels.

5. Press the Menu button on the front panel, or right-click the mouse, to save changes and return to live mode.

Searching and playing back recorded video

The TVR 40 lets you quickly search and playback recorded video. You must be in live mode to playback video. See Figure 13 below.

Figure 13: Playback screen



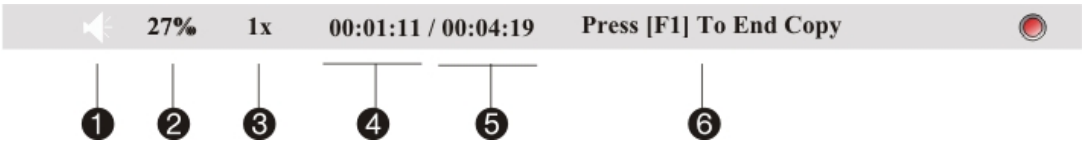
Note: You must have playback rights to playback recorded images. See “Modifying operational rights” on page 94 for more information.

The system also lets you playback channels simultaneously so that multiple images appear on-screen.

Control playback progress

When in playback mode a status bar appears on-screen during playback to show playback progress and speed. See Figure 14 below.

Figure 14: Playback status bar

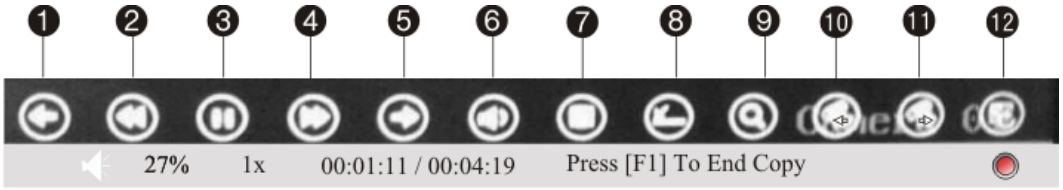


Option	Description
1. Audio	Press PLAY to silence the audio recording associated with this video. Press PLAY again to reactivate the audio. Audio in this example is on.
2. Playback progress	Shows how far you have progressed through the recorded file.
3. Playback speed	Move the joystick left or right to change the rate of playback. Nine options are available: **Single**: Advance one frame at a time. **1/8x**: An eighth of actual speed. **1/4x**: Quarter of actual speed. **1/2x**: Half of actual speed. **1x**: Actual speed.

Option	Description
	2x: Twice actual speed. **4x**: Four times actual speed. **8x**: Eight times actual speed. **MAX**: Maximum speed.
4. Current playback time	Playback always starts from time zero. The actual time of the recording is shown on the top of the screen. Move the joystick up to jump forwards 30 seconds. It is not possible to jump backwards.
5. Total playback time	Shows the duration of the recorded file. In this example, it is 4 minutes 19 seconds.
6. Start/end copy	Press the F1 button to start or stop copy a segment of the playback video.

If a mouse is connected to the unit, a toolbar appears that allows you to control many playback functions with the mouse. See Figure 15 below.

Figure 15: Mouse playback toolbar



Item	Description
1.	Jump back 30 seconds in the playback video.
2.	Decrease the playback speed. See Figure 14 for the list of speeds available.
3.	Pause playback.
4.	Increase the playback speed. See Figure 14 for the list of speeds available.
5.	Jump forward 30 seconds in the playback video.
6.	Turn on or off audio.

Icon	Description
7.	Start archiving the video.
8	Remove the Playback toolbar. To make it reappear on-screen, right-click the mouse and select Display.
9.	Digital zoom. Double left-click the mouse to zoom in. Double left-click again to return to normal view.
10 & 11.	To view full screen when in multiscreen mode, double-click the mouse on the desired screen. It appears as full screen. Left-click the mouse on one of the icons to move backwards or forwards through the full screens.
12.	Left-click the mouse to scroll through the number of multiscreens displayed.

Search recorded video

There are many different ways to search recorded videos, such as:

- Recordings which have alarms or motion detection, or have been manually recorded
- Start and end time and date of recording
- Text (from an ATM, for example)

To search for recorded video

1. In live mode press the Search button on the front panel of the TVR 40 or on the IR remote control, or right-click the mouse and select *Search*. Enter your user name and PIN, if requested.

   The Playback menu appears.

Search
OR
+ Search
Playback
Camera 1 Associated Setup Search for All
Start 04-19-2010 11:11:44 Stop 04-19-2010 13:11:44
Text
Search Play Instant Replay Page No. 001 /006
No. Start Date Start Time File Size
1 2010-04-19 11:09:23 207.5k
2 2010-04-19 11:14:10 117.0k
Media USB DISK Start Size 0MB Backup

2. In the *Camera* list box select the channel you want to search.
3. To select more than one camera for playback, click the *Associated Setup* box. In the submenu that appears, select the cameras required.
4. In the *Search for* list box select the type of recorded videos to be searched.

Option	Search for recorded file types
All	All recordings
All Time	Only scheduled time recorded files
Manual	Only manually recorded files
Alarm	Only alarm recorded files
Motion Det.	Only motion detected files

5. For the *Start* and *Stop* recording periods go to each edit box and enter the start and end dates and times as follows:

Front panel	Press the joystick to enter the edit box. Move the joystick up or down to scroll through the numbers to select a number. Move the joystick left or right to move to the next edit box.
IR remote control	Use the arrows buttons to change the numeric value. Press Enter when completed and move to the next edit box.
Mouse	Click the edit box and select the number required from the on-screen numeric list that appears.

   Note: Date has the format DD-MM-YYYY. Time has a 24-hour format. The default stop values shown are the current time and date.

6. To search for video from a particular ATM, for example, enable (✓) the *Text* check box.

   Using the mouse, select the edit box alongside the check box to enter the text to be searched (for example, text that appears on an ATM screen.) An on-screen alphanumeric keyboard appears. Click *Shift* to select the type of character required: Number, upper case

letter, lower case, letter or symbol. There are 24 symbols to select. Press 0 on the front panel to scroll between the four pages of symbols available.

Enter the text required.

7. Select *Search* to start the search.

   When the search is completed a list of all the files found appears. The list may extend over several pages. The most recent file is listed first.

   Note: If you get a message saying that there are no recordings but you were expecting some to be listed, check that you have selected the correct recorded file type option for your search.

8. Press the Live button or right-click the mouse to quit playback mode and return to live mode.

Playback recorded video

In the Playback screen there are three ways to playback a recorded file:

- Playback only the selected file
- Playback all the files listed in the search result:
- Instant replay. The system will play the last five minutes recorded by the selected camera.

You must have playback rights to playback recorded images. See “Adding a new user” on page 93 for more information.

To playback a recorded file

1. Search for the files to playback. See “Search recorded video” on page 28 for further information.
2. Select the playback option required:

   Only selected files: In the Search window select the video file required from the list displayed. Press the joystick or left-click the mouse to enter playback mode. Only the selected file will be played back.

   All files: Select *Play*. The system will play each file listed, starting with the first file.

   Instant playback: Select *Instant Replay*.

   The unit enters playback mode. The playback status bar appears on-screen. If a mouse is connected, the mouse playback toolbar also appears.

3. During playback mode, press Menu button or right-click the mouse to return to the Playback menu. All the files selected for playback are now deselected.
4. Press the Live button or right-click the mouse to quit playback mode and return to live mode.

Archiving recorded files

Archive recorded files on an external device such as a USB. As well as being able to archive a complete recorded file, you can also archive specific incidents in a file. You must be in live mode to archive video. Access to archive functions may require a password.

There are three ways to archive a file:

Quick archive:	Quickly archive all recorded files on the unit by pressing the Archive button on the front panel or IR remote control.
Standard archive:	Select the recorded files that you want to archive.
Auto backup:	Recordings are automatically backed up according to a set schedule.

You must have playback rights to playback recorded images. See “Adding a new user” on page 93 for more information.

Files can be saved on several types of media. If both a DVD/CD and a USB device are found in the TVR 40, the DVD/CD takes precedence.

Note: Avoid moving the external recording device when backing up information onto it.

Quick archive

To quickly archive all recorded files

1. Insert the backup device into the TVR 40.
2. Go to the *Media* edit box and select the backup device required.
3. In live mode press the Archive button on the front panel of the TVR 40 or on the IR remote control, or right-click on the mouse and select *Archive*. Enter your user name and PIN, if requested. The Playback screen appears.

   The last 24 hours of videos recorded on the unit are listed.
4. Press Archive button again to immediately start downloading the video files on to the selected media. A message appears when copying is completed.

   Note: Press the Menu button to abort the archive and return to live mode.

Manually select files to archive

You can archive specific incidents from a recorded video. When playback is stopped, they are saved automatically onto the selected archive medium. Incidents can be saved until the archive medium is full.

Note: Avoid moving the external recording device when backing up information onto it.

To archive recorded files found in a search

1. Insert the backup device into the TVR 40.
2. Press the Search button on the front panel or IR remote control, or right-click the mouse and select Search. Enter your user name and PIN, if requested. The Playback screen appears.

   The last two hours of videos recorded on the unit are listed.
3. Search for the recorded files you want to copy. See “Search recorded video” on page 28. The most recent file is listed first.
4. To select all the video files listed, press the F2 button on the front panel or IR remote control. All files will be highlighted. To deselect all the files, press F2 again.

   To select a specific file, highlight the file required in the window and press the F1 button on the front panel or IR remote control.
5. Go to the *Media* edit box and select the required archive medium.
6. Go to *Start* and press Enter or left-click the mouse to write the files to the archive medium. A message appears when copying is completed. Press OK.
7. Press Menu or right-click the mouse to quit playback mode and return to live mode.

To archive specific incidents in a recorded file

1. Insert the backup device into the TVR 40.
2. Press the Search button on the front panel or IR remote control, or right-click the mouse and select Search. Enter your user name and PIN, if requested. The Playback screen appears.

   The last two hours of videos recorded on the unit are listed.
3. Search for the recorded files you want to copy. See “Search recorded video” on page 28. The most recent file is listed first.
4. Go to *Media* and select the desired medium on which to copy the file.
5. Select the video file(s) in the search results list that you want to archive. Selected files are highlighted.

   If using the front panel or remote control, press F1 and select the file you want. Press Enter to start playback.

   If using the mouse, double-click the file you want. Playback starts.

   The Playback toolbar will show the archiving progress of the selected file.
6. When you reach the part of the playback that you want to copy, press F1 to start copying. A red radio button appears in the right hand corner of the screen when copying is taking place.

   Press F1 again to stop copying. The red radio button disappears. You can copy several sections of the same playback file.
7. If using the mouse, adjust the playback variables as required. See “Control playback progress” on page 27 for the description of the icons. Playback can also be paused by pressing Enter, and then pressing it again to restart it.

8. When finished copying this recording, press Menu or right-click the mouse to exit. A message appears asking you to confirm that you want to copy the file. Select OK.
9. Press Menu or right-click the mouse to quit playback mode and return to live mode.

Automatically backup recorded files

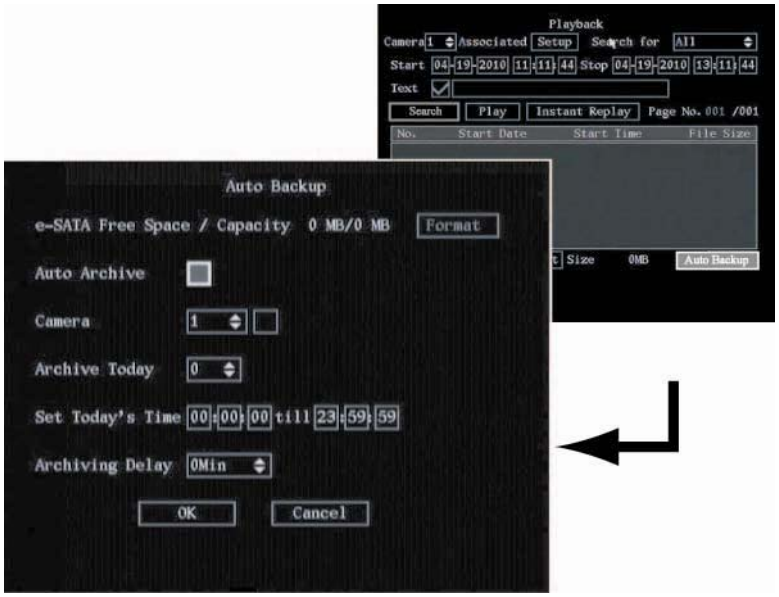
You can automatically backup recordings according to a set schedule. For example, at the end of every day all recordings from all cameras are automatically backed up.

Backups are done to an external hard drive.

To backup recorded files

1. Connect the external hard drive to the TVR 40.
1. In live mode press the Search button on the front panel or IR remote control, or right-click the mouse and select *Search*. Enter your user name and PIN, if requested. The Playback screen appears.
2. Go to the *Media* edit box and select the option *eSATA HDD* on which to do the auto backup.

   Note: To be able to record video on a DVR-eSATA-DVD drive ensure that the eSATA option in the Recording menu has been set *Record*. See "Recording settings" on page 63 for more information.
3. Go to *Backup* and press the joystick or left-click the mouse to select. The Backup submenu appears.


Playback
Camera 1 Associated Setup Search for All
Start 04-19-2010 11:11:44 Stop 04-19-2010 13:11:44
Text
Search Play Instant Replay Page No. 001 /001
No. Start Date Start Time File Size
Size 0MB Auto Backup
Auto Backup
e-SATA Free Space / Capacity 0 MB/0 MB Format
Auto Archive
Camera 1
Archive Today 0
Set Today's Time 00:00:00 till 23:59:59
Archiving Delay 0Min
OK Cancel

4. The first time you use the external hard drive, go to the *e-Sata Free Space* Format button and press Enter or left-click the mouse to format the external drive.
5. Go to the *Auto Archive* check box and press the joystick or left-click the mouse to enable Auto Archive, if required.
6. Go to the *Camera* list box and select the camera whose recordings are to be archived and enable the check box beside the camera number box. Do this for each camera to be included in the backup.

7. Go to the *Archive Today* list box to set the number of days back to be automatically archived. Up to 6 days can be selected. Today is 0. Yesterday is -1.
8. Go to the *Set Today's Time* edit boxes and enter the period of time during the day to be archived.

   Note: Time has a 24-hour format.
9. Go to the *Archiving Delay* list box and select the time after activating the TVR 40 for auto backup to start. If the option “0Min” is selected, backup will start immediately OK is pressed.
10. Select OK to save your changes and return to live mode.

Controlling a PTZ camera

You can control the PTZ operation of the cameras. It is entered from live mode.

The PTZ camera can be controlled using buttons on the front panel and IR remote control as well using the on-screen PTZ control icons accessed with the mouse. However, some functions are only available using the mouse.

See Figure 16 below for the on-screen PTZ control icons accessed using the mouse.

Figure 16: Mouse PTZ control icons

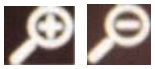
The autopan function is only available using the mouse. This function is the automatic back and forth movement of a camera. The function depends on the camera used.

Access to PTZ functions may require a PIN.

To enter PTZ mode

1. In live mode press the joystick on the front panel or OK on the IR remote control, or right-click on the mouse, and select *PTZ Control.*
2. Move the camera as required. See Table 4 on page 35 for the descriptions on how to control PTZ using the front panel, IR remote control and mouse.

Table 4: Controlling PTZ

Control			Description
Front panel	**IR remote control**	**Mouse on-screen icons**	
Move joystick up/down and left/right.	Press the arrow buttons.		Pan left/right and tilt up/down.
Press the Zoom+ and Zoom- buttons.	Press Zoom+ and Zoom- buttons.		Zoom in (+) and out (-).
Not available	Press Focus+ and Focus- buttons.		Focus in (+) and out (-).
Not available	Not available		Open (+) and close (-) the iris control.
Press the Preset button	Press the Preset button.	Right-click the mouse and select the *Preset* menu command.	Call up a pre-programmed preset. See below for further instructions.
Press the Tour button	Press the Tour button.	Right-click the mouse and select the *Tour* menu command.	Call up a pre-programmed Shadow tour. See below for further instructions.
Not available	Not available		Call up a pre-programmed autopan. See below for further instructions.

3. To quit PTZ mode press the Menu button on the front panel or the OK button on the IR remote control, or right-click on the mouse and select *Exit.*

To call up a PTZ preset number

1. In PTZ mode, do one of the following:

Front panel	Press the Preset button. Enter a preprogrammed three-digit preset number. Preset starts immediately.
Remote control	Press the Preset button. Enter a preprogrammed three-digit preset number. Preset starts immediately.
Mouse	Right-click the mouse and select the menu option *Preset*. Select one of the preset numbers listed.

Note: The PTZ preset number is preprogrammed. See section “PTZ settings” on page 86 for further information.

The TVR 40 will adjust to the settings of this preset number.

2. If you want to use a different preset PTZ number, repeat step 1 when in the PTZ mode. The unit will re-adjust to that preset number.
3. To exit PTZ mode press the Menu button on the front panel or the OK button on the IR remote control, or right-click the mouse and select *Exit*. You will return to live mode and the camera will stay in its current position.

To call up a PTZ shadow tour number

1. In PTZ mode, do one of the following:

Front panel	Press the Tour button. Enter a preprogrammed three-digit preset number. Shadow tour starts immediately.
Remote control	Press the Tour button. Enter a preprogrammed three-digit preset number. Shadow tour starts immediately.
Mouse	Right-click the mouse and select the menu option *Tour*. Select one of the tour numbers listed.

   Note: The PTZ preset number is preprogrammed. See section "PTZ settings" on page 86 for further information.

   The TVR 40 will adjust to the settings of this shadow tour number.

2. If you want to use a different shadow tour PTZ number, repeat step 1 when in the PTZ mode. The unit will re-adjust to that shadow tour number.
3. To exit PTZ mode press the Menu button on the front panel or the OK button on the IR remote control, or right-click the mouse and select *Exit*. You will return to live mode and the camera will stay in its current position.

To start/stop autopan

Note: This function is only available when using the mouse.

1. In live mode right-click the mouse and select *PTZ control* to enter PTZ mode. Click the Autopan icon to start the panning.

   Note: If the PTZ is in autopan mode and you exit PTZ mode, PTZ will continue in autopan mode. You must re-enter PTZ mode to stop the autopan.

2. To exit PTZ mode, right-click the mouse and select *Exit*. You will return to live mode and the camera will stay in its current position.

Manually acknowledging an alarm

When an alarm is triggered, the alarm indicator on the front of the TVR 40 flashes red to alert you to the alarm. The alarm can be manually acknowledged to silence it. However, the alarm will still be active.

This option can only be done when the alarm output is set to *Acknowledge*. See "External alarm output" on page 82 for further information.

All alarm acknowledgements are saved in the system log.

To manually acknowledge an alarm

1. When the alarm indicator on the front panel is flashing red, press the manual alarm button to acknowledge the alarm. The red flashing light will return to green.

   The LED of the alarm source (for example, camera or system status) will continue to display red.

Overview of the menu structure

The TVR 40 has an icon driven menu structure that allows you to configure the unit's parameters. Figure 17 below shows the TVR 40 main menu screen. Each icon symbolizes the content of the submenu. The menu icon selected has a white action frame around it.

Many of the submenus are only available to privileged users, such as the system administrator.

You must be in live mode to access the menu mode where you can setup or change the TVR 40 settings in menu mode.

Figure 17: The TVR 40 main menu

Table 5: Description of the eight menu icons

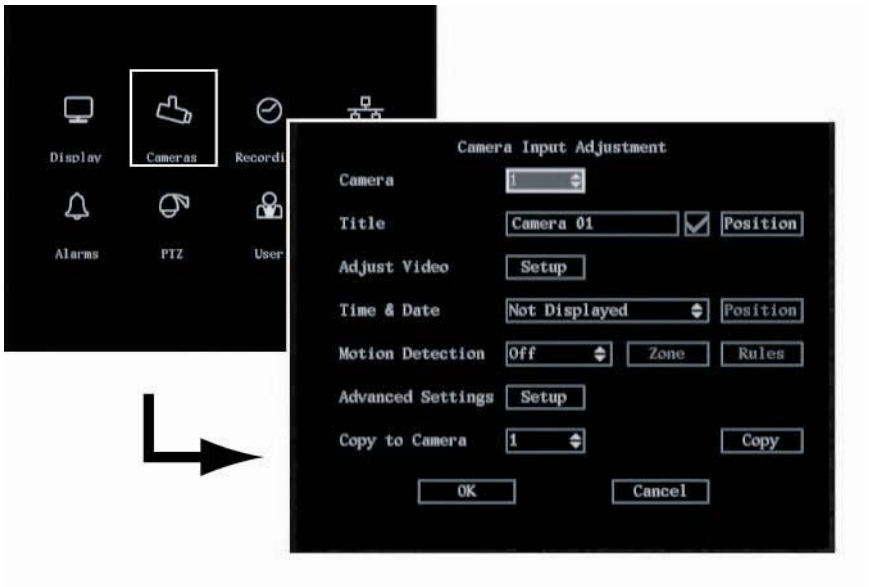
Menu icon	Description
Display	Configure the bus address, login PIN request, menu timeout, video standard, VGA, time and date, and multiscreen. See "Display settings" on page 41.
Cameras	Configure the camera titles, video adjustment, advanced camera settings, time and date position, and motion detection. See "Camera settings" on page 49.
Recording	Configure the recording mode, e-SATA, image resolution, recording rates, bits rates, and pre and post recording settings. See "Recording settings" on page 63.
Network	Configure the standard network settings, e-mail, and advanced network settings. See "Network settings" on page 71.
Alarms	Configure the alarm input type, alarm rules, alarm output type, PTZ linkage, notification settings. See "Alarm settings" on page 79.
PTZ	Configure the RS-485, PTZ protocols, and PTZ addresses. Comprehensive configuration of UTC domes, and basic setup of non-UTC devices. See "PTZ settings" on page 85.
User	Configure user rights. See "User settings" on page 91.
System	Configure the RS-232. Manage firmware upgrade, and HHD. View log and system view. Acknowledge alarms, reboot the DVR, and power off. See "System settings" on page 97

To access a menu

1. Press the Menu button on the front panel of the TVR 40 or on the IR remote control, or right-click the mouse and select *Menu*. Enter your name and PIN, if requested. The main menu appears.

   Note: The factory default Administrator name is "admin" and the PIN is "1234".

2. Using the joystick, IR remote control, or the mouse, select the menu icon required.
3. Press the joystick, press the OK button on the IR remote control, or left-click the mouse to enter the selected menu. The selected menu screen appears. An example is shown below:



4. When all changes to menu options have been done, go to OK. Press the joystick, press OK on the IR remote control, or left-click the mouse to save the changes and return to the main menu screen.

   To abort all changes select Cancel.

   Note: Selecting OK in submenus confirms but does not save the changes made. Changes are only saved when OK is selected in the main menu.

5. Press the Live button on the front panel or the IR remote control, or right-click the mouse, to exit the main menu and return to live mode.

Navigating through a menu screen

The TVR 40 is delivered with default settings that can be easily changed from the menus.

You can use the mouse, front panel buttons, or the IR remote control to change settings.

Mouse: Use the mouse to select any option or button on the screen.

Front panel: Move the trigger-point joystick on the front panel up, down, left, and right to navigate through the options and press the joystick for Enter to select. Press the Menu button to return to the configuration category and the main menu.

IR remote control: Press the arrow buttons on the IR remote control to navigate through the options and press OK to select. Press the Menu button to return to the configuration category and the main menu.

Caution: If there is a power failure during setup, you will loose all user-modified settings. The system will return to the programmed settings.

Changes to screen settings can be entered in various ways as shown in Table 6 below.

Table 6: Types of control

Control	Function	Description
	Check box	Select either enable (✓) or disable (empty). Press the joystick to toggle between them or left-click the mouse.
	List box	Select one of the listed options. **Front panel:** Move the joystick up or down to select an option. Press the joystick to accept changes made in the list box. **IR remote control:** Press the up or down arrows to select an option. Press OK to accept changes made in the list box. **Mouse:** Position the mouse cursor on the list box arrows and left-click the mouse to scroll through the options.
	Edit box	An edit box lets you type characters to set the value of an option. Click the box and an on-screen keyboard will appear. Depending on the type of information required, the on-screen keyboard will be numeric or alphanumeric. This function can only be done using the mouse. Left-click the mouse. A numeric or alphanumeric on-screen display appears. Select the characters required. When completed, left-click the mouse on the menu screen to accept changes.
	Setup button	Execute a function or enter into the next submenu. A setup button is inactive (grey) until its parameter option is enabled.

Turning off the TVR 40

Turn off the power switch located on the back of the unit.

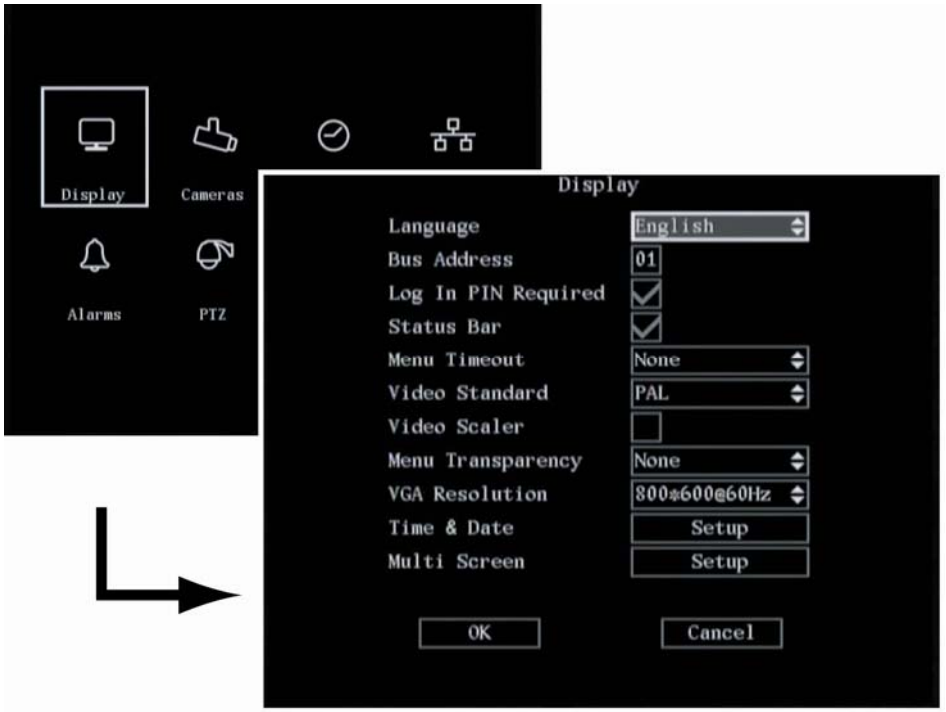
Display settings

Use the Display menu to configure which information is displayed on-screen and how it should look. The following options can be configured:

- The language of the unit
- The device ID
- If a PIN is required
- If the status bar appears on-screen
- The menu timeout
- The video output standard
- The video scaling
- The menu transparency
- The VGA interface
- The brightness of the screen
- The system time and date
- The multiscreen format
- Daylight Saving Time (DST)
- The dwell time and alarm dwell time

The Display menu icon is located in the main menu. The following menu appears when you select the Display icon:

Figure 18: The Display setup menu



The following procedures show how to change the monitor display settings from the Display menu. They can be changed in any order.

Selecting a language

To select a language

1. In the Display menu go to *Language* and do one of the following:

   Front panel: Select the list box. Press the joystick for Enter. Move the joystick up or down to scroll through the languages. Press the joystick to select a language.

   IR remote control: Use the IR remote control arrow buttons to select the list box and press OK. Use the up/down arrows to scroll through the language and press OK to select a language.

   Mouse: Left-click the mouse to select the required language. The language on screen changes immediately.

   The default language is English.

   Note: The last language used on the TVR 40 will be the unit's language when the system is rebooted.

2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Setting the device ID

When you use the IR remote control to operate the TVR 40, the TVR 40 must have a device ID. The default device ID is “01“. If there is more than one DVR used, each unit must have its own unique device ID as otherwise the IR remote control will control all the units together.

To set the TVR 40’s device ID

Front panel or remote control	In the Display menu go to the *Bus Address* edit box and press F1. Using the number buttons, enter the number of the device ID.
Mouse	In the Display menu go to the *Bus Address* edit box and left-click the mouse. Select the number from the on-screen numeric display.

When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Setting the PIN requirement

A PIN is required by default to access the TVR 40. See “Modifying a user’s PIN” on page 93 for information on PINs.

To setup the PIN requirement

1. In the Display menu go to the *Log In PIN Required* check box and press Enter or left-click the mouse to enable (✓) or disable it
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Displaying the status bar

The status bar appears on-screen by default.

To display the status bar

1. In the Display menu go to the *Status Bar* check box and press the joystick or left-click the mouse to enable (✓) or disable it.
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Menu timeout

This is the time after which the selected menu screen reverts to the live mode.

To setup the menu timeout

1. In the Display menu go to the *Menu Timeout* list box and press Enter or left-click the mouse. Select the time.
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Selecting video standard

The TVR 40 can support PAL or NTSC video output. PAL is the default format.

To select the video standard

1. In the Display menu go to the *Video Standard* list box and press Enter or left-click the mouse. Select either NTSC or PAL video output format.

   Note: If you are using default settings but the images on screen flicker, there is a NSTC/PAL mismatch. Check the NTSC/PAL option selected in the Display menu.
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Video scaling

You can change the settings of the monitor display size to accommodate for differently sized monitors.

To adjust the screen scaling

1. In the Display menu go to the *Video Scaler* and press Enter or left-click the mouse to enable the check box (✓) .

   When disabled, the video output display resolution is 704 x 576 PAL (or 704 x 480 NTSC). When activated the display resolution becomes 640 x 576 PAL (or 640 x 480 NTSC).
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Menu transparency

You can modify the transparency of menu items on screen relative to the background to make the on-screen text easier to read.

To change the menu transparency

1. In the Display menu go to the *Menu Transparency* list box and press Enter or left-click the mouse. Select the transparency level. The screen transparency changes as you scroll through the list of options.
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Defining VGA resolution

You can define the VGA resolution and refresh frequency.

To setup the VGA interface

1. In the Display menu go to the *Menu Transparency* list box and press Enter or left-click the mouse. Select one of the options available:
   - 1280*1024@60 Hz
   - 1024*768@60 Hz (default)
   - 800*600@60 Hz
2. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Setting system time and date

You can setup the TVR 40 date and time as well as the Daylight Saving Time (DST). This is the date and time that will appear on screen.

You can setup when DST for the TVR 40 starts and stops in the year. It is deactivated by default.

To set the system time and date

1. In the Display menu go to the *Time & Date* setup button and press Enter or left-click the mouse. The Time & Date submenu appears.
2. Go to the *Date Format* list box. Press Enter to select the list box and then move the joystick up or down to scroll through the options. Press Enter again to select the required option. If using the mouse, left-click the mouse to select the date format.
3. Go to the *Date* edit box. The default date format is dd-mm-yyyy. Do one the following:

Front panel: Press Enter to enter edit mode. Move the joystick up or down to scroll through the numbers in the date box. Press the joystick again to exit edit mode. Repeat for each date box.

Mouse: Left-click the mouse to enter edit mode. An on-screen numeric keyboard appears. Click the date numbers required. Left-click the mouse again to exit edit mode. Repeat for each date box.

4. Go to the *Time* edit box. The time is 24-hour format (hh-mm-ss). Do one the following:

   Front panel: Press Enter to enter edit mode. Move the joystick up or down to scroll through the numbers in the time box. Press the joystick again to exit edit mode. Repeat for each time box.

   Mouse: Left-click the mouse to enter edit mode. An on-screen numeric keyboard appears. Click the time numbers required. Left-click the mouse again to exit edit mode. Repeat for each time box.

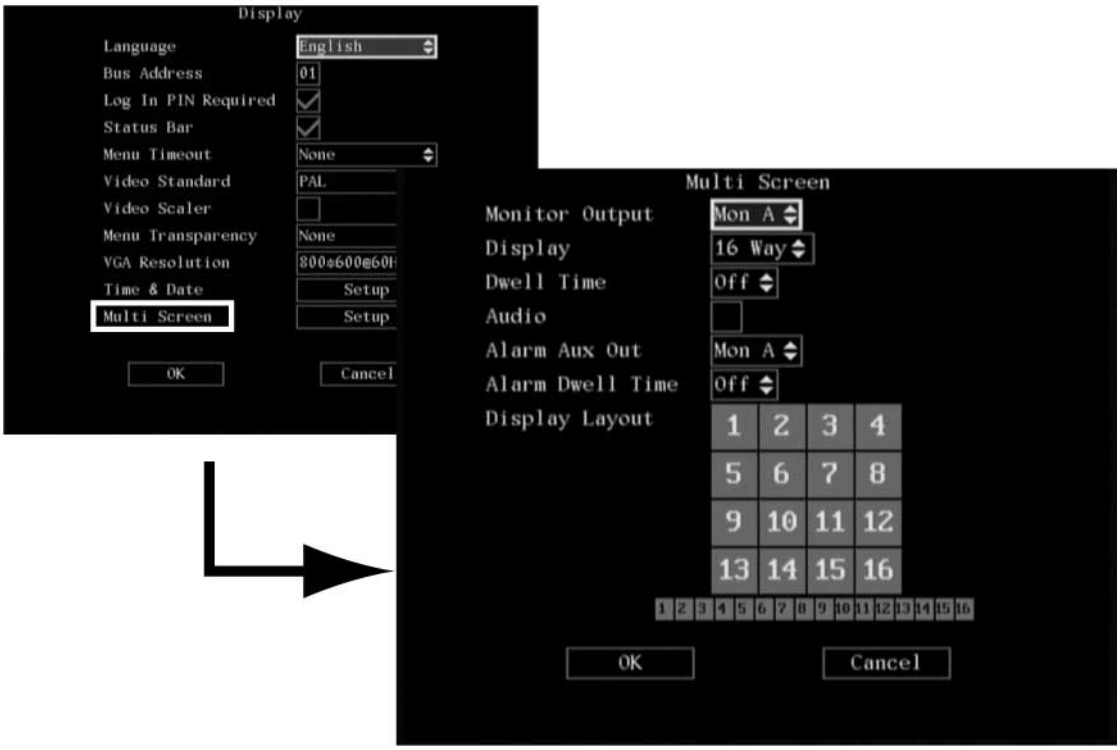
5. Go to the *Enable Daylight Savings* check box and press Enter or left-click the mouse to enable (✓). Once enabled, the dates become active.
6. Select the month and day when Daylight Savings starts and stops.
7. Go to OK and press the joystick or left-click the mouse to confirm the changes and return to the Display menu.
8. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Multiscreen and sequencing

This submenu allows you to set up how many camera cameos appear on-screen by default as well the dwell time for a sequence.

To setup multiscreen and dwell time

1. In the Display menu go to *Multi Screen* setup button and press Enter or left-click the mouse. The Multi Screen menu appears.



2. Go to the *Monitor Output* list box. Select between monitor output A or B. Monitor A is default.
3. Go to the *Display* list box. Select the desired multiscreen mode from the drop-down list. Press Enter to select the list box and then move it up or down to scroll through the options. Press Enter again to select the required option. If using the mouse, left-click the mouse to scroll through the display formats. See Table 7 below for the options available.

Table 7: Multi screen options available

Number of TVR 40 channels	Multi screen options
4	Full 4 way
8	Full 4 way 8 way
16	Full 4 way 9 way 12 way 16 way

4. Go to the *Dwell Time* list box. The dwell time is the amount of time the unit stays on an individual camera before moving onto the next one in a sequence.

   Select the desired dwell time from the drop-down list. Press Enter to select the list box and then move it up or down to scroll through the options. Press Enter again to select the required option. If using the mouse, left-click the mouse to scroll through the display formats. See Table 8 on page 48 for the options available.

Table 8: List of dwell time options

Options	Description
Off	The live display will not automatically switch.
5S	The live display will automatically switch after 5 seconds.
10S	The live display will automatically switch after 10 seconds.
20S	The live display will automatically switch after 20 seconds.
30S	The live display will automatically switch after 30 seconds.

For example: If a 16-channel TVR 40 has the 4-screen live mode and the 20-second dwell time selected, the TVR 40 will cycle four camera displays every 20 seconds.

5. Go to the *Audio* check box. You can select to hear and record audio from the selected camera. Press Enter or left-click the mouse to enable (✓) or disable audio.
6. Go to *Alarm Aux Out* to select which monitor should work as an alarm spot monitor. If there is an alarm, the video will pop up on this monitor.
7. Go to the *Alarm Dwell Time* edit box. This is the time delay before the alarm video appears on screen. If there is more than one alarm, there is also the delay switching between the alarm videos. Select the time delay required: Off, 3, 4, 5, or 10 seconds.
8. Go to *Display Layout*. Select the sequence in which the cameras will be displayed in the main monitor. Cameras are sequenced in numeric order by default. Each numbered square on-screen corresponds to that numbered camera. Press the number button that corresponds to the camera you want displayed first. Continue for each camera. The sequence order is displayed in the bar underneath.
9. When complete, go to OK and press Enter or left-click the mouse to accept all the changes and return to the Display menu.
10. When you have made all the changes required in the Display menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

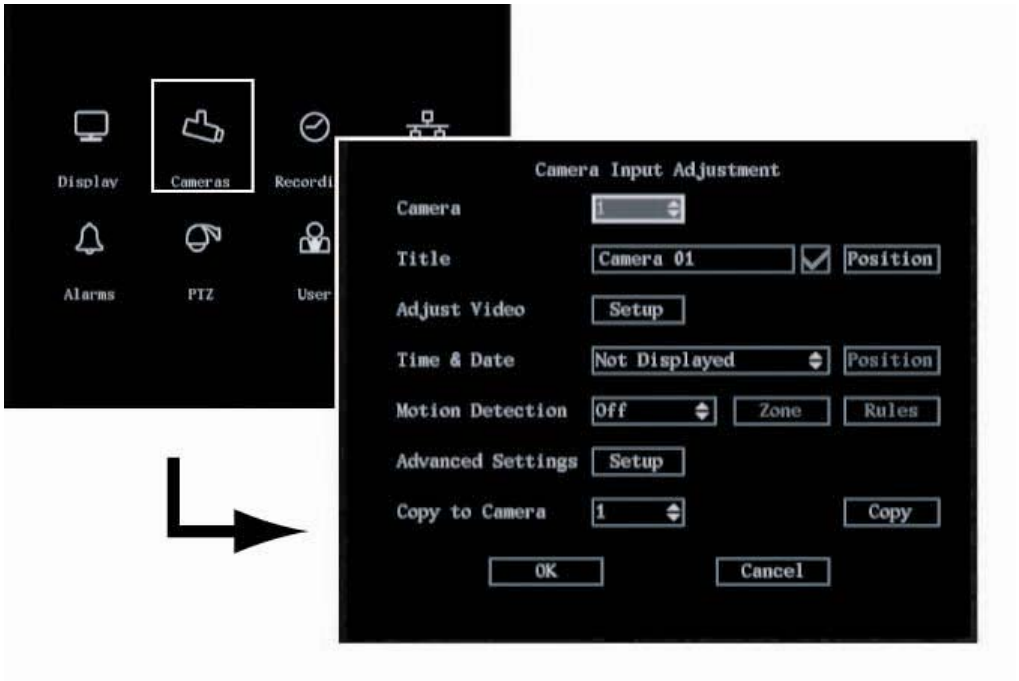
Camera settings

Use the Camera menu to configure the cameras. The following options can be configured:

- The name of each camera
- The position of the camera name on screen
- The camera brightness, contrast, saturation and hue
- The display properties of each camera (OSD)
- The area on screen to be masked
- When to view a tamper alarm
- The video loss alarm
- The motion detection alarm

The Camera icon is located in the main menu. The following menu appears when you select the Camera icon:

Figure 19: The Camera menu



The following procedures show how to change camera settings from the Camera menu. They can be changed in any order.

All changes made to the Camera menu apply to the selected camera. The camera settings of one camera can easily be copied to another camera.

Setting up the camera title

Each camera can be given a title, which must be unique. If you do not give a camera a title, it is automatically pre-numbered.

To setup the camera title

1. In the Camera menu go to the *Camera* list box and press Enter or left-click the mouse. Select the number of the camera you want to name.
2. Go to the *Title* edit box and press Enter or left-click the mouse to enter into edit mode.
3. Enter the camera title. Left-click the mouse to enter edit mode. An alphanumeric on-screen display appears. Select the characters required. Default is a number. Click *Shift* to select the type of required character (upper or lower case letters, or special characters.) The character type is shown on the bottom of the screen.

   Note**: This edit function can only be done using the mouse.**
4. Left-click the mouse to exit edit mode.
5. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Positioning the camera title

You can position the camera title anywhere on the screen.

To position the camera title on screen

1. In the Camera menu enable the *Title Position* check box (✓) if you want the camera title to appear on-screen. When enabled, the Position setup button alongside it becomes active.
2. Go to the *Position* setup button and press Enter, or left-click the mouse, to enter into edit mode. A grid appears on-screen with the camera title in the bottom right corner of the screen.
3. Move the joystick up/down/left/right to move the camera title around the screen. When you are satisfied with the position, press Enter again or left-click the mouse to confirm and return to the Camera menu.

   Instructions on how to position the camera title are also provided on-screen.

4. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Modifying the image quality

Different cameras and backgrounds may need to have the screen image modified in order to obtain the best video image. Use this menu to configure the video image. You can setup each camera separately or copy the video parameters of one camera to another camera.

To modify the image quality of the camera video

1. In the Camera menu select the camera you want to adjust. Go to the *Adjust Video* setup button and press t Enter, or left-click the mouse. The Adjust Video menu appears.
2. Go to the *Brightness* setup button and press Enter, or left-click the mouse. A scroll bar appears at the bottom of the screen.

3. Use the up/down arrow buttons to adjust the brightness level. The video camera changes at the same time.
4. When you are satisfied with the real time video of the camera, press Enter, or left-click the mouse.
5. Repeat steps 2 to 4 for the *Contrast* settings of this camera.
6. When completed, select OK and return to the Camera menu.
7. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Displaying the current time and date on-screen

Select the format of the current date and time displayed on-screen, as well as where it appears.

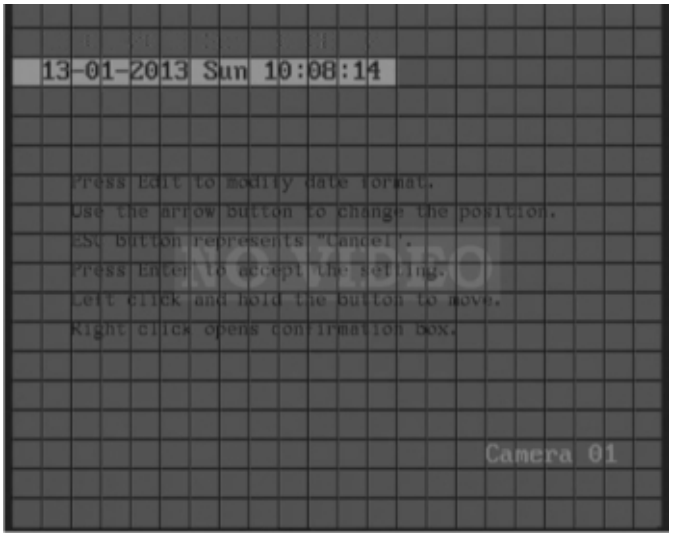
To setup a camera's displayed time and date

1. In the Camera menu select the camera you want to adjust.
2. Go to the *Time & Date* list box and press Enter or left-click the mouse to select the display mode required.

Solid	The text contrast automatically adjusts relative to the background.
Transparent	The screen image appears through the text.
Not Displayed	Nothing is displayed (Default).

3. Press Enter or left-click the mouse to confirm the entry.
4. Go to the *Position* setup button and press Enter or left-click the mouse. A grey screen with the date/time bar in white appears.
5. Press F1 if using the front panel, press the Analog button on the IR remote control, or right-click the mouse and select Format, to select one of the formats displayed:
   - YYYY-MM-DD, Day of the week, 24-hour time
   - YYYY-MM-DD, 24-hour time
   - MM-DD-YYYY, Day of the week, 24-hour time
   - MM-DD-YYYY, 24-hour time
   - DD-MM-YYYY, Day of the week, 24-hour time
   - DD-MM-YYYY, 24-hour time

   Instructions on how to position the time and date are also provided on-screen.


13-01-2013 Sun 10:08:14
Press Edit to modify date format.
Use the arrow button to change the position.
Esc button represents "Cancel".
Press Enter to accept the setting.
Left click and hold the button to move.
Right click opens confirmation box.
Camera 01

6. Using the arrow buttons move the date/time bar around the screen. When satisfied with the position press Enter, or right-click the mouse and select OK, to return to the Camera menu.

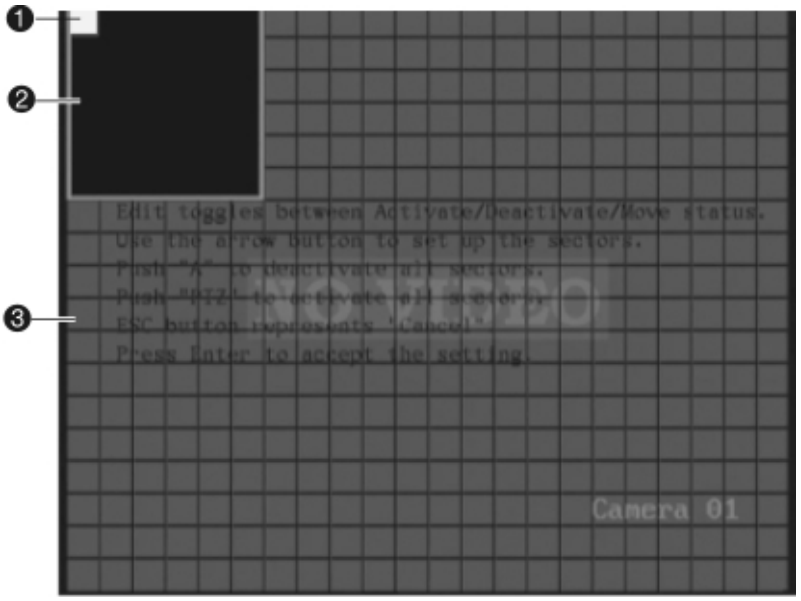
7. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Motion detection

The TVR 40 can be setup to trigger an alarm if a camera detects motion. Select the level of sensitivity to motion as well as the target size so that only objects that could be of interest can trigger a motion recording. For example, the motion recording is triggered by the movement of a person but not that of a cat.

Mask out any areas of motion on-screen that you do not want to trigger recording such as a flag on a pole or a moving tree.

Figure 20: Example of motion detection setup screen



1. White square to mark out new activated motion detection zone
2. Existing motion detection zone
3. Area not selected for motion detection

To setup the TVR 40 to respond to a motion detection alarm

1. **To set the motion detection sensitivity level**

   In the Camera menu go to the Motion Detection list box and select the desired motion detection sensitivity level required.

   There are seven levels to choose from: 0 (lowest) to 6 (highest) as well as “Off”. If “Off” is selected, the unit will not respond to any motion detection. If 0 to 6 is selected, motion detection Zone and Rules setup buttons become active. Press Enter on the front panel or IR remote control, or left-click the mouse, to confirm the change.

2. **To select the motion detection zone(s)**

   a. Go to the *Zone* setup button and press Enter or left-click the mouse. The Motion Zone setup screen appears.

   There is a solid white pane on-screen. The motion zone setup steps are the same as those for mask zone setup (see page 57).

   b. **Front panel/IR remote control:** Use the following buttons to setup the motion zones:

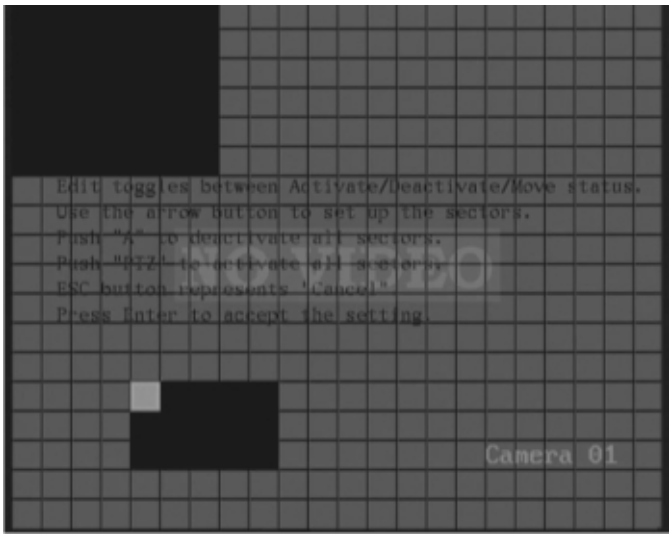
Front panel buttons	IR remote control buttons	Action
<, >, ∧, ∨	<, >, ∧, ∨	Move the white pane to any position
F1	**Analog**	Toggle between the white (deactivate) and grey (activate) panes
>	>	When the square is grey (activated) increase the size of the transparent zone when moved left to right
<	<	When the square is grey (activated) decrease the size of the transparent zone from the right to left
∨	∨	When the square is grey (activated) increase the size of the transparent zone from up to down
∧	∧	When the square is grey (activated) decrease the size of the transparent zone from down to up
F2	**IP**	Select the whole screen as a motion zone
F2	**IP**	Clear all motion zones
Enter	**OK**	Save changes and return to the Camera menu
Menu	**Menu**	Cancel setup and return to the Camera menu

   Move the white square to the area on-screen that you want to mark as a motion detection zone. Press F1. The square becomes transparent. This shows the selected square is activated and will detect motion.

   Use the arrow buttons or drag the square with the mouse cursor in a left-to-right or up-to-down direction to extend the transparent square. When you have finished marking out the transparent zone to be masked, press Enter to exit and return to the solid white square to continue masking.

   Mouse: Position the mouse cursor at the top of the zone to be activated for motion detection. Drag the cursor in a left-to-right or up-to-down direction to extend the transparent square.

   c. Repeat step b for each zone on-screen where you want to detect motion. An example of motion detection zones is shown below.


Edit toggles between Activate/Deactivate/Move status.
Use the arrow button to set up the sectors.
Press Enter to accept the setting.
Camera 01

d. To clear part of a motion detection zone:

Front panel/IR remote control: Move the solid white square to the top of the motion detection zone to be deleted. Press the F1/Analog button. The white pane becomes transparent. Use the arrow buttons in a left-to-right or up-to-down direction to mark the squares in the motion zone to be kept. Once the zone to be deleted is marked in a white square, use the arrow buttons in a right-to-left or down-to-up direction to over-write the selected area. The marked squares become transparent and are no longer selected as a motion detection zone.

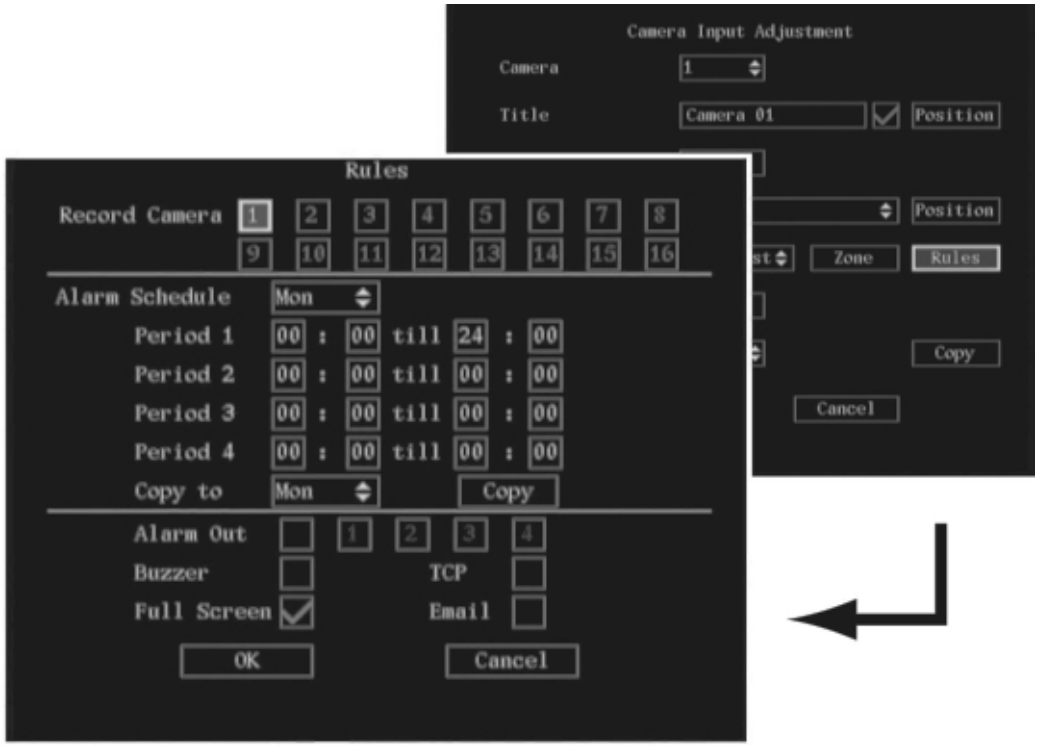
Mouse: Drag the mouse cursor in a left-to-right or up-to-down direction over the activated motion detection zone. The activated squares are deactivated.

To clear all motion detection zones, press the F2 button.

e. Press Enter, or right-click the mouse and select OK, to confirm changes and to return to the Camera menu.

3. **To setup the response rules to a motion alarm**

a. Go to the *Rules* setup button and press Enter on the front panel or left-click the mouse. The Rules menu appears.



b. Go to the *Record Camera* check boxes and select the cameras from which you want to be able to record a motion alarm. Press Enter, or left-click the mouse, to enable the option. Press or click again to disable.

Note: For the cameras to be able to record a motion alarm, they must first be setup for motion recording. This is done in the Recording menu. See"Setting up a camera's recording schedule" on page 68 for more information.

c. Go to *Alarm Schedule* and select when you want the TVR 40 to respond to a motion alarm. You can select up to seven days in a week and up to four time periods for each a day.

Note: The four daily time periods cannot overlap.

d. Go to the notification options and press Enter or left-click the mouse to enable (✓) or disable how you want the TVR 40 to respond to a motion alarm during live mode.

Table 9: Notification options on how to respond to a camera tamper alarm

Notification option	Description
Alarm Out	Alarm Out is activated. Up to four alarm outputs can be enabled.
Buzzer	An audible alarm sounds
TCP	Alarm information is sent to the remote IP (see "Advanced IP settings" *on page 74* for more information)
Full Screen	The alarm channel will be displayed on screen
Email	Alarm information is sent to an e-mail address (see "E-mail settings" *on page 73* for more information)

The TVR 40 returns to live mode when there is no longer a motion alarm.

e. If you want to copy the periods from one camera to another, go to the *Copy to* list box and select which day you want to copy to and then select *Copy*.

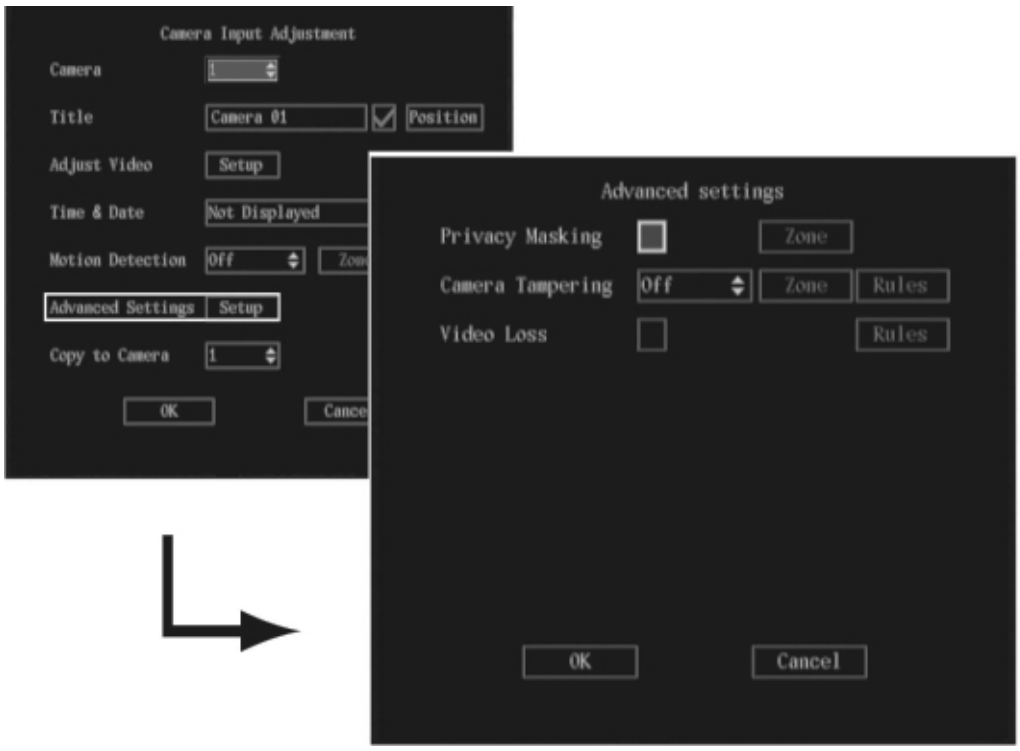
4. Select OK to confirm the changes and to return to the Camera menu.
5. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Privacy masks

You can mask a sensitive area on screen so that it remains hidden from view. An example would be when the view of a camera overlooks onto residential premises. The area hidden by the privacy mask will not be viewed live nor recorded but will appear as a blank area on screen.

To setup a privacy mask

1. In the Camera menu go to *Advanced Settings* setup box and press Enter or left-click the mouse. The Advanced Settings submenu appears.

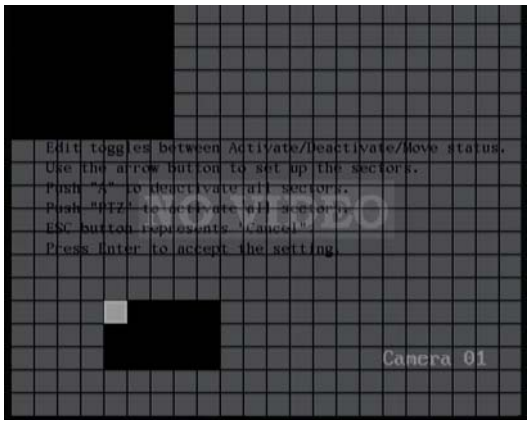


2. Go to the *Privacy Masking* check box and press Enter or left-click the mouse to enable (✓). The Zone option is activated. Privacy masking is disabled by default.

   Note: No masked zone appears on-screen when Privacy Mask is disabled.

3. Go to the *Zone* button and press Enter or left-click the mouse.

   The matrix screen appears. For PAL there are 22 x 18 panes in the matrix. In the top left-hand corner of the matrix there is a white pane.


Edit toggles between Activate/Deactivate/Move status.
Use the arrow button to set up the sectors.
Push "A" to deactivate all sectors.
Push "F2" to activate all sectors.
ESC button represents 'Cancel'
Press Enter to accept the setting.
Camera 01

4. **Front panel/IR remote control:** Use the following buttons to setup the mask zones:

Front panel buttons	IR remote control buttons	Action
<, >, ∧, ∨	<, >, ∧, ∨	Move the white pane to any position
F1	**Analog**	Toggle between the white (deactivate) and grey (activate) panes
>	>	When the square is grey (activated) increase the size of the transparent zone when moved left to right
<	<	When the square is grey (activated) decrease the size of the transparent zone from the right to left
∨	∨	When the square is grey (activated) increase the size of the transparent zone from up to down
∧	∧	When the square is grey (activated) decrease the size of the transparent zone from down to up
F2	**IP**	Select the whole screen as a motion zone
F2	**IP**	Clear all motion zones
Enter	**OK**	Save changes and return to the Camera menu
Menu	**Menu**	Cancel setup and return to the Camera menu

Move the white square to the area on-screen that you want to mark as a mask zone. Press F1. The square becomes transparent. This shows the selected square is masked.

Use the arrow buttons or drag the square with the mouse cursor in a left-to-right or up-to-down direction to extend the transparent square. When you have finished marking out the transparent zone to be masked, press Enter to exit and return to the solid white square to continue masking.

Mouse: Position the mouse cursor at the top of the zone to be activated for masking. Drag the cursor in a left-to-right or up-to-down direction to extend the transparent square.

5. Repeat step 4 for each zone on-screen that you want to mask.

   There can be up to four masked zones in a screen. The maximum size of a masked zone is 8 x 8 panes. The minimum size is one pane.

6. Press Enter to return to the advanced settings submenu.

   Note: The changes have not yet been saved. Changes are only saved when OK is selected in the Camera menu screen.

7. Repeat steps 1 to 6 for the other cameras that require masking.

8. In the Advanced Settings submenu press OK to return to the Camera menu.
9. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Viewing a camera tamper alarm

You can setup the system to alert you when someone has deliberately blocked a camera view, such as by spraying paint on the lens (also known as anti-masking). You can set it up so that a specific part of the screen can detect a tamper and thereby trigger an alarm. You can also setup how the system will alert you to the tamper alarm. You can only setup one anti-masking area on screen.

To setup the viewing of a camera tamper alarm

1. In the Camera menu go to *Advanced Settings* setup button and press Enter or left-click the mouse. The Advanced Settings submenu appears.
2. **To set the detection sensitivity level to a camera tamper alarm**

   Go to the *Camera Tampering* list box. Select the sensitivity level required. The options are:

   - Off
   - Low
   - Normal (default)
   - High

   When Low, Normal, or High are selected, the *Zone* and *Rules* setup boxes become active.

   The *Zone* submenu allows you to select in which part of the screen a tamper can be detected and trigger an alarm.

   The *Rules* submenu allows you to setup how to handle warning notifications, such as alarm operational issues.
3. **To set the zone on screen that can trigger a camera tamper alarm**

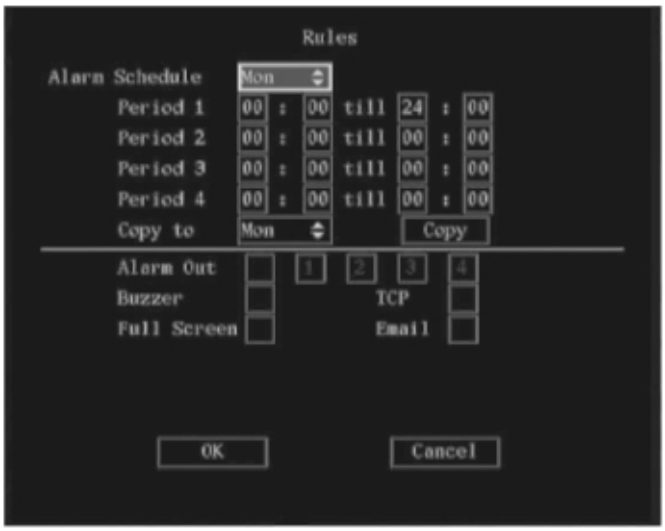
   a. In the Advanced Settings submenu go to the *Zone* setup button. Press Enter or left-click the mouse to access the matrix screen.

   b. The setup is the same as for masking a zone. See the section on setting up a privacy mask on page 57 for further instructions.

   Note: There can only be one masked tamper zone to trigger a camera tamper alarm.

   c. When you have finished masking the tamper zone press Enter, or right-click the mouse and select OK, to confirm your changes and return to the Camera menu.
4. **To setup the tamper alarm response**

   a. In the *Advanced Settings* submenu go to the *Camera Tampering Rules* setup button. Press Enter or left-click the mouse to access the Rules submenu.



b. Go to the *Alarm Schedule* list box. Select the day of the week for which you want to set the response time schedule.

c. Go to *Period 1* and enter the time period for the response. You can set up to four time periods for each day of the week. You must reboot the TVR 40 to make the time periods operational.

Note: The daily time periods cannot overlap.

d. Go to the notification options and press Enter, or left-click the mouse, to enable (✓) or disable how you want the TVR 40 to respond to a camera tamper alarm.

Notification option	Description
Alarm Out	Alarm Out is activated. Up to four alarm outputs can be enabled.
Buzzer	An audible alarm sounds
TCP	Alarm information is sent to the remote IP (see section *Network* on page 75 for more information)
Full Screen	The alarm channel will be displayed on screen
Email	Alarm information is sent to an e-mail address (see section *Network* on page 73 for more information)

e. When you have finished modifying all the menu items required, select OK to confirm changes and return to the Camera menu.

5. Repeat steps 2 to 4 for each camera and then return to the Camera menu.

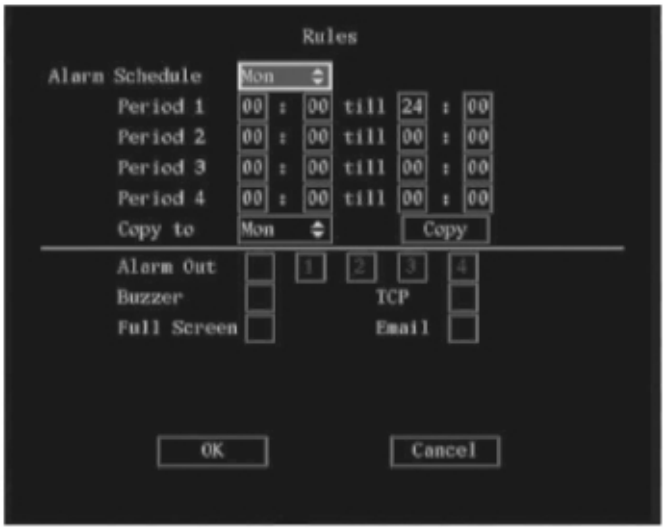
6. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Setting up a video loss alarm

The video image can be lost if a video cable or camera develops a fault. The unit can be setup so that an alarm is triggered when a video loss fault occurs. However, the video loss alarm is only triggered if it occurs during a programmed time schedule.

To setup a video loss alarm

1. In the Camera menu go to the *Camera* list box. Select the camera whose options you want to modify.
2. Go to the Advanced Settings submenu and enable (✓) the *Video loss* check box. The *Rules* setup button is activated.
3. Go to the Rules setup button and press Enter or left-click the mouse. The V*ideo Loss Rules* submenu appears.



4. Go to the Alarm Schedule and select the day of the week for which you want to set the response time schedule. Go to Period 1 and enter the time period for the response. You can set up to four time periods for each day of the week. Time is entered in the 24-hour format.

   Note: The four daily time periods cannotoverlap.

5. Go to the notification options and press Enter or left-click the mouse to enable (✓) or disable how you want the TVR 40 to respond to a video loss tamper alarm.

Notification option	Description
Full Screen	On Alarm channel will be displayed full
Buzzer	An audible alarm sounds
TCP	Alarm information is sent to the remote IP (see “Network settings” on page 71.)
Email	Alarm information is sent to an Email address (see “Network settings” on page 71)
Alarm Out	When enabled, the Alarm Out is activated. Up to four alarm outputs can be enabled.

6. Select OK to confirm changes and return to the Camera menu.

7. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

To copy a camera's settings to another camera

1. In the Camera menu go to the *Camera* list box and select the camera whose options you want to copy.
2. Go to *Copy to Camera* and select the camera to which you want to copy the settings.
3. Go to Copy and press Enter or left-click the mouse. All settings will be copied to the selected camera.

   Note: Motion alarm zones cannot be copied.
4. When you have made all the changes required in the Camera menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Recording settings

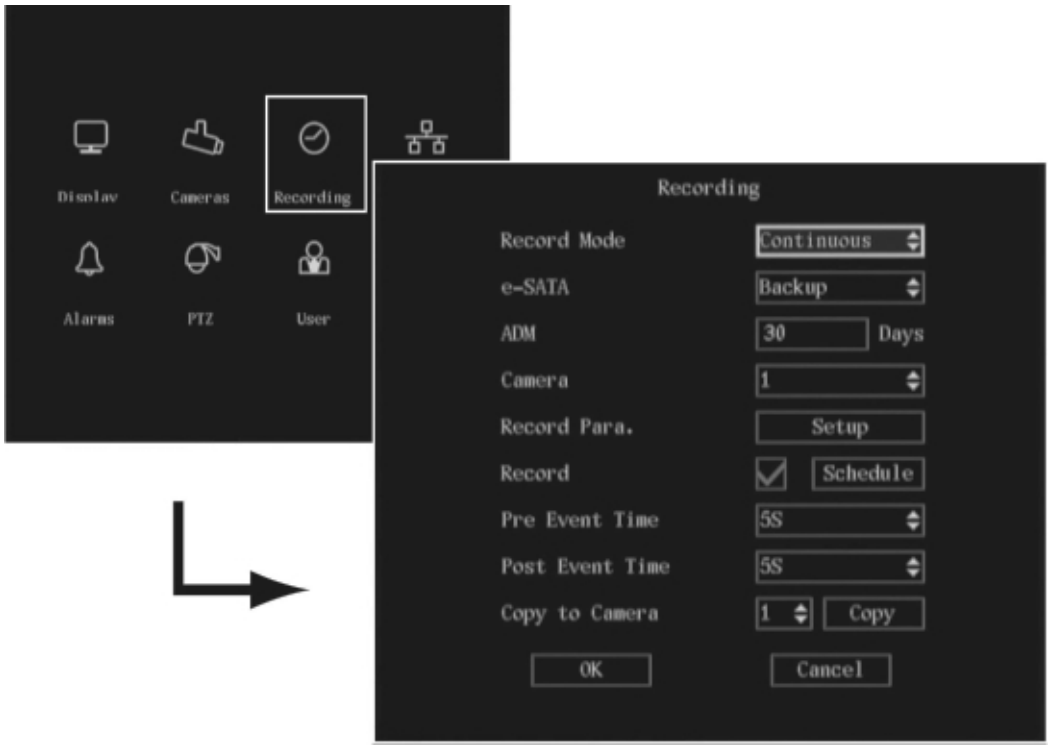
Use the Recording menu to setup how the TVR 40 records information. The following options can be configured:

- Handling information when the HDD is full
- eSATA record or backup
- Auto deletion
- Audio and/or video recorded
- Bit rate
- Frame rate
- Camera resolution
- Recording schedule of a camera
- Pre and post recording times for alarm recordings

Configuring the recording settings

The Recording icon is located in the main menu. The following screen appears when you select the Recording icon:

Figure 21: The Recording menu



The following procedure shows how to change the recording settings of a selected camera in the Recording menu. They can be changed in any order.

In the main menu, go to the Recording icon and press Enter or left-click the mouse. The Recording menu appears.

Responding to full HDD

You can select how the TVR 40 responds when the HDDs become full and there is no longer sufficient space to save new data.

To setup how the TVR 40 will respond to full HDDs

1. In the Recording menu go to the *Record Mode* list box and select one of the two options:

Option	Description
Continuous	When all the HDDs in the TVR 40 are full, the TVR 40 will overwrite the earliest written recorded files and continue recording.
No Overwrite	When all the HDDs in the TVR 40 are full, the device will handle the event as a “Hard Disk Full” condition and respond according to how this condition has been programmed under the Notification menu. For more information, see page 71.

2. When you have made all the changes required in the Recording menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu. Press the Menu button to return to live mode.

Using an external storage device for backup

You can use an external storage device, such as an e-SATA HDD, as a backup for video or add its recording capacity to that of the TVR 40 itself. If you change this option, you must reboot the TVR 40 to implement the change.

To select if the e-SATA port should record or backup

1. In the Recording menu go to the e-SATA edit box and select one of the two options:

Option	Description
Record	Extend the recording capacity of the TVR 40. If the e-SATA storage device is part of the total storage capacity then only the USB storage device can be used as backup.
Backup	Backup data onto an e-SATA backup device, such as a USB storage device, or DVR backup device. For further information see also section “Archiving recorded files” on page 31. **Caution:** If the external storage is part of the total internal capacity (the *Record* option has been selected), the external device is no longer accessible for exporting video.

2. When you have made all the changes required in the Recording menu, go to OK and press Enter or left-click the mouse to save all changes and return to live mode.

Auto delete mode (ADM)

You can select the number of days that recordings from a specific camera are saved before being automatically deleted. The default value is 30 days.

To setup the auto delete mode

1. In the Recording menu go to the *ADM* edit box and enter the number of days after which auto delete occurs.
3. Press Enter, or left-click the mouse, to confirm the entry.

Modifying the recording parameters of a camera

Use this submenu to select how the TVR 40 responds to normal and alarm events. The record type, resolution, bit rate, and image quality can all be made to be higher for when an alarm event is recorded. See Table 10 below for the limitations in dual streaming.

Table 10: Stream limitations

	Maximum resolution supported		Note
Main stream	2 CIF	12 fps	These can be specified from the TVR 40 unit.
	4 CIF	8 fps	
Sub stream	CIF	Real time	These cannot be specified from the TVR 40 unit. They can only be specified from the browser.
	QCIF	Real time	

To change the recording parameters of a camera

1. In the Recording menu go to the *Camera* list box and select the camera whose settings you want to modify.
2. Go to the *Record Para.* Setup box and press Enter, or left-click the mouse. The Recording submenu appears.

3. **To setup normal and alarm recordings**

   You can select the recorded image parameters for both normal and alarm events. However, *Enable Event* must be enabled for alarm events to be recorded differently from normal events. If this option is not enabled then it is not possible to change any image parameters when *Event* is selected as a setting—all event parameters will be identical to those of normal events.

   a. If you want the recorded image parameters for alarm events to be different from those of normal events, go to the *Enable Event* check box and press Enter, or left-click the mouse, to enabled the check box (✓). Press or click again to disable.

   b. Select which event type you want to set:

Option	Description
Normal	Records both scheduled and manual.
Event	Records all alarms.
Time lapse	Records from a specific time.

4. **To select audio and/or video recording**

   You can select whether the recording is video only (default), or audio and video. If this option is changed, you must reboot the TVR 40 to implement the change.

   Go to the *Stream Type* list box and select one of the two options:

Option	Description
Audio&Video	Records both audio and video.
Video	Records video only.

5. **To change the camera resolution**

   You can select one of four video resolutions. A high image resolution requires that a high bit rate must also be selected. QCIF is the lowest resolution value and 4CIF the highest. If you change this option, you must reboot the TVR 40 to implement the change.

   Go to the *Resolution* list box and select one of the options listed: QCIF, CIF (default), 2CIF, and 4CIF.

6. **To select the frame rate**

   You can select between several different frame rates. A low bit rate can be selected when the frame rate is low.

   Go to the *Record Rate/fps* list box. Use the arrow buttons to select one of the options listed: Full (PAL is 25 FPS and NTSC is 30FPS), 20, 16, 12, 10, 8, 6 (default), 4, 2, 1, 1/2, 1/4, 1/8, 1/16.

7. **To select the maximum bit rate**

   See Table 11 for the recommended bit rate ranges by resolution option. The actual maximum bit rate must be calculated from your camera, background, and image quality requirements.

   Table 11: Bit rate by resolution

Resolution	Default bit rate	Recording speed
4CIF	896 Kbps	8 fps
2CIF	896 Kbps	12 fps
CIF	1.0 Mbps	Real time
QCIF	256 Kbps	Real time

   Go to the *Max Bit Rate* list box and select one of the options listed (bps):

   32K, 48K, 64K, 80K, 96K, 128K, 160K, 192K, 224K, 256K, 320K (default), 384K, 448K, 512K, 640K, 768K, 896K, 1M, 1.25M, 1.5M, 1.75M, 2M, and "User defined".

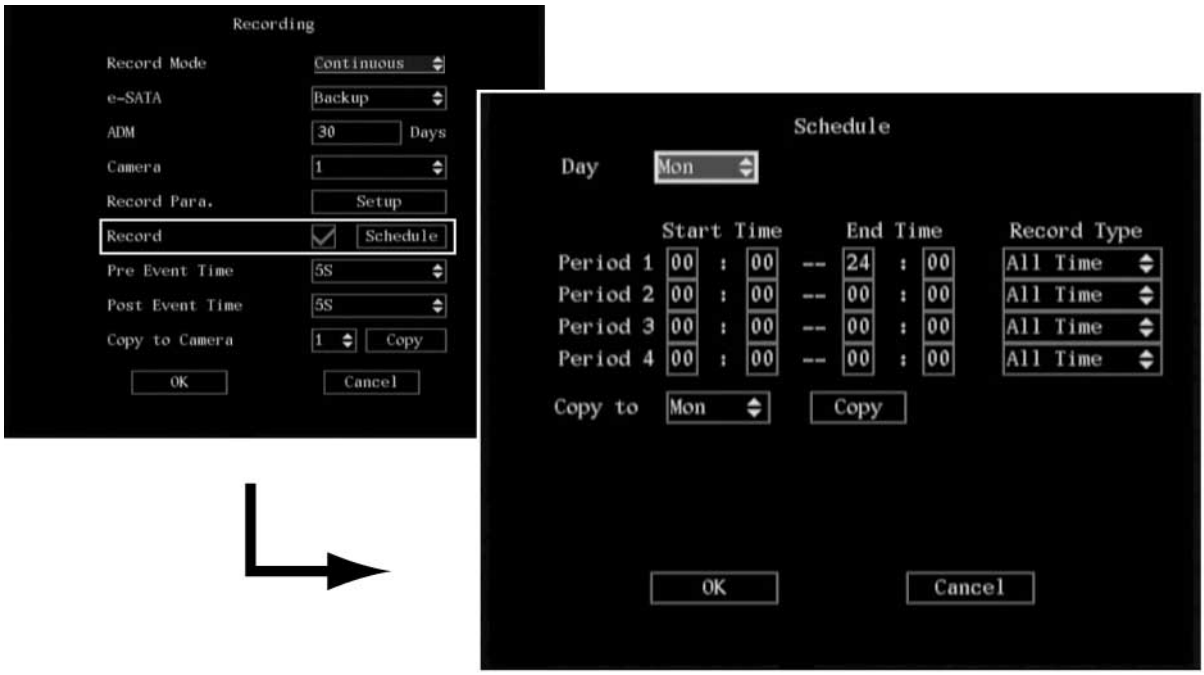
8. Select OK to confirm changes and return to the Recording menu.
9. When you have made all the changes required in the Recording menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

Setting up a camera's recording schedule

You can setup a recording schedule for selected camera(s). You need to reboot the TVR 40 after changing this option

To setup a camera's recording schedule

1. In the Recording menu go to the *Camera* list box and select the camera for which you want to do a recording schedule.
2. Go to the *Record* check box and press Enter or left-click the mouse to enable (✓) scheduled recording. When the check box is enabled, the Record schedule setup button is activated.
3. Select the *Record* schedule setup button and press Enter, or left-click the mouse. The *Schedule* submenu appears.



4. In the *Day* list box select the day of the week for which you want to set the recording schedule.
5. For period 1 select the start and end recording times for that day. Select *Record Type* and set the type of recording (All time, Motion, Alarm, Motion or Alarm, Motion and Alarm, or Command).
6. Repeat steps 3 and 4 for the other required time periods.

   Note: The four daily time periods cannot overlap.
7. Select the schedules for the other days of the week for this camera as required.
8. When completed, select OK to confirm changes and return to the Recording menu.
9. When you have made all the changes required in the Recording menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

To set the pre recording time for motion detection alarm and external alarm recordings

Before you set the prerecording time you must first enable the TVR 40 to respond to a motion detection alarm (see “Motion detection” on page 53) and/or an external alarm (see “External alarm output” on page 82).

The TVR 40 is recording all the time at a defined rate. The prerecording time is the time before a motion or external alarm is triggered and which is included in the alarm data. It is related to the bit rate. The lower the selected bit rate, the longer the prerecording time can be.

1. In the Recording menu go to the *Pre Event Time* list box and select one of the time options listed (Disabled, 30S, 25S, 20S, 15S, 10S, and 5S).

To set the post recording time for motion detection alarm and external alarm recordings

Before you set the prerecording time you must first enable the TVR 40 to respond to a motion detection alarm (see “Motion detection” on page 53) and/or an external alarm (see “External alarm output” on page 82).

The post recording time is the time after a motion or external alarm is triggered that is included in the alarm data.

1. In the Recording menu go to the *Post Event Time* list box and select one of the options listed (Disabled, 10 min, and 5 min).

To copy the camera settings

1. Go to the *Copy to Camera* list box and select one of the cameras listed.
2. Go to Copy press Enter or left-click the mouse.
3. TVR 40 will ask you if you want to copy the current camera settings to another Camera. Select OK or Cancel.

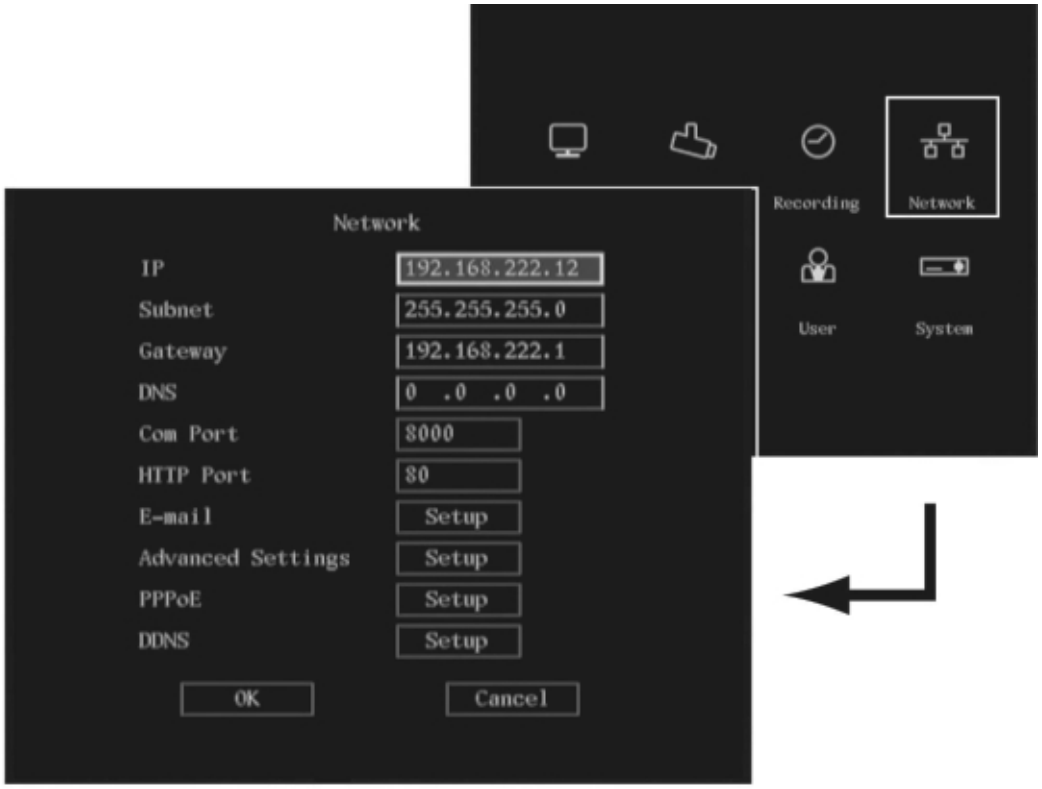
Network settings

Use the Networking menu to setup the network settings of the TVR 40. The following options can be configured:

- IP address and settings
- Subnet mask
- Gateway IP
- DNS address
- Network communication port
- HTTP port
- E-mail notification
- PPPoE
- DDNS

The Network icon is located in the main menu. The following screen appears when you select the Network icon:

Figure 22: The Network menu



The following procedure shows how to change the recording settings of a selected camera in the Recording menu. They can be changed in any order.

In the main menu go to the Network menu icon and press Enter or left-click the mouse. The Network menu appears.

Caution: The TVR 40 will automatically reboot when any network parameter is changed and saved.

Network settings

Use the network menu to set standard network settings.

IP	This field shows the device's current IP address.
Subnet mask	This field shows the subnet mask for your network so the DVR will be recognized within the network.
Gateway	This field shows the gateway for your network so the DVR will be recognized within the network.
DNS	This field shows the DNS server for your network.

If you are using a static IP address, these values listed above will need to be entered manually. If the network type is DHCP or PPPoE, these values will be automatically assigned.

To define the network settings

1. In the Network menu go to the *IP* edit box and press Enter or left-click the mouse to enter edit mode. Using the numeric buttons on the front panel, or the on-screen keyboard, enter the IP address. Press Enter again or left-click the mouse to exit edit mode.
2. Go to the *Subnet* edit box and press Enter, or left-click the mouse to enter edit mode. Using the numeric buttons on the front panel, or the on-screen keyboard, enter the subnet mask number. Press Enter again or left-click the mouse to exit edit mode.
3. Go to the *Gateway* edit box and press Enter or left-click the mouse to enter edit mode. Using the numeric buttons on the front panel, or the on-screen keyboard, enter the gateway IP number. Press Enter again or left-click the mouse to exit edit mode.
4. Go to the *DNS* edit box and press Enter or left-click the mouse to enter edit mode. Using the numeric buttons on the front panel, or the on-screen keyboard, enter the DNS number. Press Enter again or left-click the mouse to exit edit mode.
5. Go to the *Com Port* edit box and press Enter or left-click the mouse to enter edit mode. Using the numeric buttons on the front panel, or the on-screen keyboard, enter the address. Enter again or left-click the mouse to exit edit mode. The number must be greater than 2000.
6. Go to the *HTTP Port* edit box and press Enter or left-click the mouse to enter edit mode. Using the numeric buttons on the front panel, or the on-screen keyboard, enter the IE

browser port value. Enter again or left-click the mouse to exit edit mode. The default value is 80.

Note: If you change the http port from the default value 80 then you must also enter the port value in the IE Browser address. For example, if the http port is 81 and IP is 192.168.222.12 then in the browser enter http://192.168.222.12:81

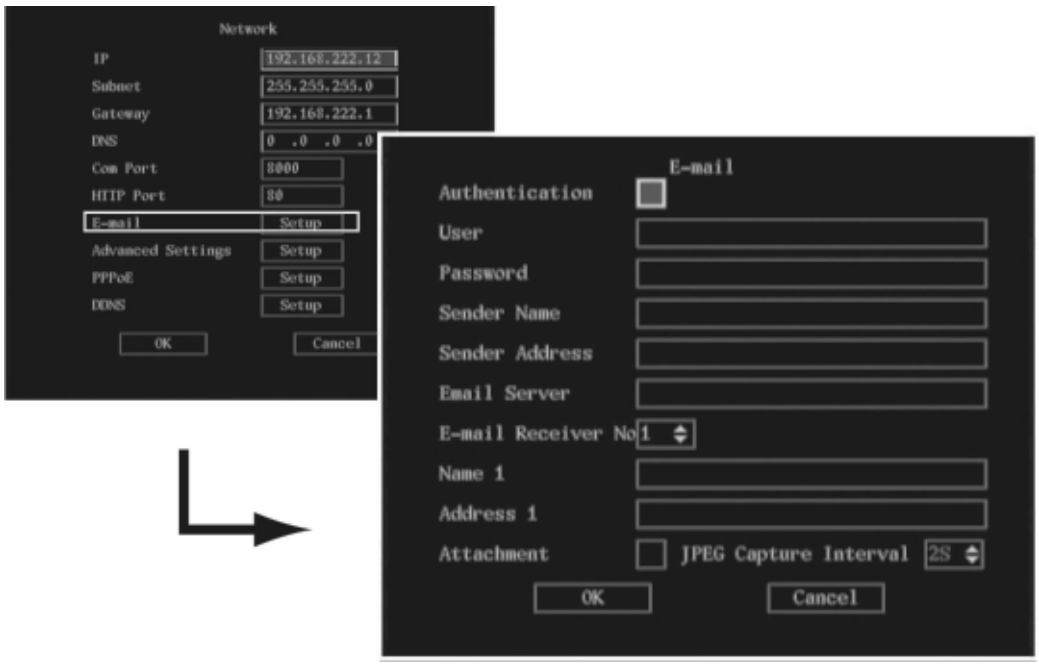
7. When you have made all the changes required in the network menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

E-mail settings

The TVR 40 has can send e-mail notifications of alarm events through the network. The e-mails can be sent to up to two different addresses. The device can send up to five jpeg images of a recording with an e-mail.

To setup e-mail notification

1. In the Network menu go to the *E-mail* setup box and press the joystick for Enter, or left-click the mouse. The E-mail submenu appears.



2. If your E-mail server requires a user name and PIN when sending an E-mail, select *Authentication* and press the joystick, or left-click the mouse, to enable the check box (✓). The User and Password setup boxes are then activated.
3. Go to the *User* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the e-mail account user name.

   Note: Press the Shift key in the on-screen alphanumeric keyboard to change the type of character (uppercase, lowercase, symbol, number). Alphanumeric information can only be entered using the mouse.

4. Go to the *Password* edit box and press the joystick for Enter, or left-click the mouse. Enter the e-mail account password.
5. Go to the *Sender Name* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the name of the person sending the e-mail.
6. Go to the *Sender Address* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the e-mail address of the sender.
7. Go to the *Email Server* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the SMTP server address.
8. The e-mail notifications can be sent to up to two addresses. In the *Mail Receiver No.* list box select whether Receiver Number 1 or 2 will receive the notification. Depending on which is selected, the Name and Address numbers will automatically change.
9. Go to the *Name* edit box and press the joystick, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the name of the receiver that should appear in the e-mail as the receiver.
10. Go to the *Address* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the e-mail address of the receiver.
11. Repeat steps 8 to 10 if there is a second receiver.
12. If jpegs will be sent with the e-mails, go to *Attachment* and press the joystick, or left-click the mouse, to enable (✓) the check box. The J*PEG Capture Interval* list box becomes activated.
13. If jpeg images of a recording will be sent with an e-mail, you need to define the capture interval in seconds between each jpeg. Select the capture interval from the list: 2, 3, 4 or 5 seconds.

    Note: Check with your ISP or IT department for details on mail server and mail server login.
14. Select OK to return to the Network menu.
15. When you have made all the changes required in the Network menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

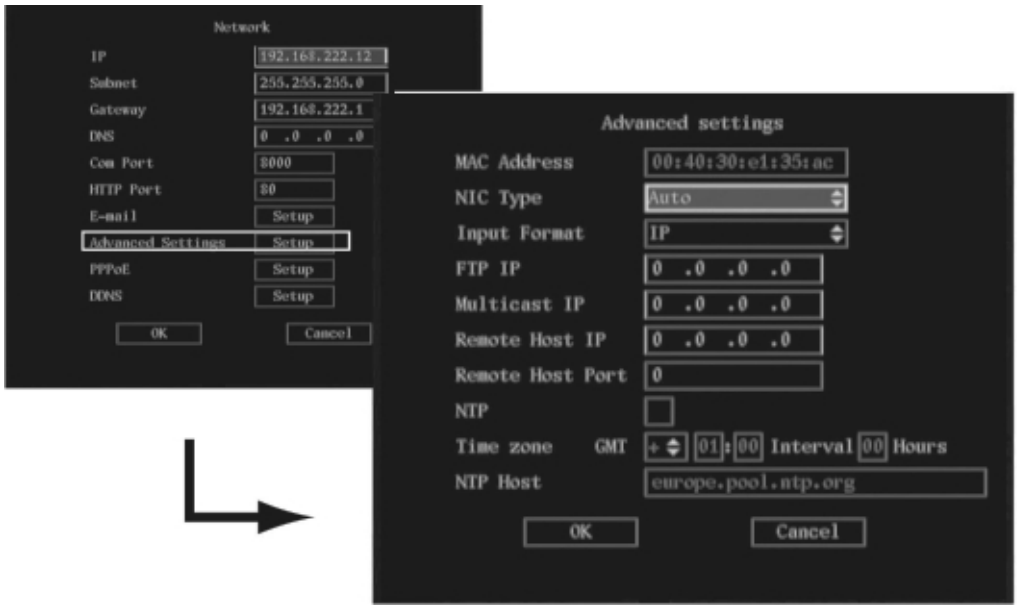
Advanced IP settings

Use this setting if using a direct connection to an ADSL.

To setup the Advanced IP settings

1. In the Network menu go to the *Advanced Settings* setup box and press the joystick for Enter, or left-click the mouse. The Advanced Settings submenu appears.

   The *MAC Address* edit box shows the MAC address of the TVR 40 unit.



2. Go to the *NIC Type* list box and select one of the three options listed:
   - Auto
   - 100M Full Duplex
   - 10M Full Duplex
3. Go to the *Input Format* list box and select either IP or Domain Name.

   If the option IP is selected, *FTP IP* edit box appears below. If the option *Domain Name* is selected, *Domain Server* edit box appears instead.
4. Depending on which entry is shown, use the numeric buttons on the front panel, or the on-screen numeric keypad if using the mouse, to enter the IP address of the *FTP IP*, or the domain server of the *Domain Name*. If using the front panel, press the joystick for Enter.

   Note: Use the FTP IP if the PPPoE function is used, and the TVR 40 gets a dynamic IP address from the ISP. If you set the FTP IP you will get one fixed Internet IP, TVR 40 will send information such as its name, serial number, and current IP to that fixed IP address. This is called the Fixed Transfer Protocol IP (FTP IP). The IP server with that fixed Internet IP can receive DVR information and be used to resolve DVR dynamic IP. Contact your local supplier to obtain the IP server software.
5. Go to the *Multicast IP* edit box and press the joystick, or left-click the mouse. Using the numeric buttons on the front panel, or the on-screen numeric keypad if using the mouse, enter a D-class IP address between 224.0.0.0 - 239.255.255.255, and press Enter. If using the front panel, press the joystick for Enter.

   This function is optional as not all systems use it.

   Note: Some routers or network switchers do not allow the multicast function. Multicast is not supported over the internet by ISP providers.
6. Go to the *Remote Host IP* edit box and press the joystick, or left-click the mouse. Using the numeric buttons on the front panel, or the on-screen numeric keypad if using the mouse, enter the remote host IP address. If using the front panel, press the joystick for Enter.

7. Go to the *Remote Host Port* edit box and press the joystick, or left-click the mouse. Using the numeric buttons on the front panel, or the on-screen numeric keypad if using the mouse, enter the remote host port value. If using the front panel, press the joystick for Enter.
8. Go to the *NTP* check box and press the joystick, or left-click the mouse to enable (✓) or to disable the option.
9. Go to the *Time Zone* edit boxes and set the time zone in which the TVR 40 is located.
10. Go to the *Interval* edit box and enter the number of hours after which the TVR 40 should synchronize its time with that of the network server.
11. Go to the *NTP Host* check box and press the joystick, or left-click the mouse. Enter the NTP server address. The default address is *europe.pool.ntp.org*.

    Note: For the NTP to work, the DNS IP address needs to be setup correctly.
12. When all the changes have been done, select OK to confirm the changes and return to the Network menu.
13. When you have made all the changes required in the Network menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

PPPoE dial-up settings

Use this setting if using a direct connection to an ADSL.

To setup a PPPoE dial-up setting

1. In the Network menu go to the *PPPoE* setup box and press the joystick for Enter, or left-click the mouse. The PPPoE submenu appears.
2. Go to the *PPPoE* check box and press the joystick, or left-click the mouse, to enable (✓) or disable the option.
3. Go to the *User Name* edit box and press the joystick for Enter. Using the on-screen alphanumeric keyboard, enter the user name provided by your ISP.

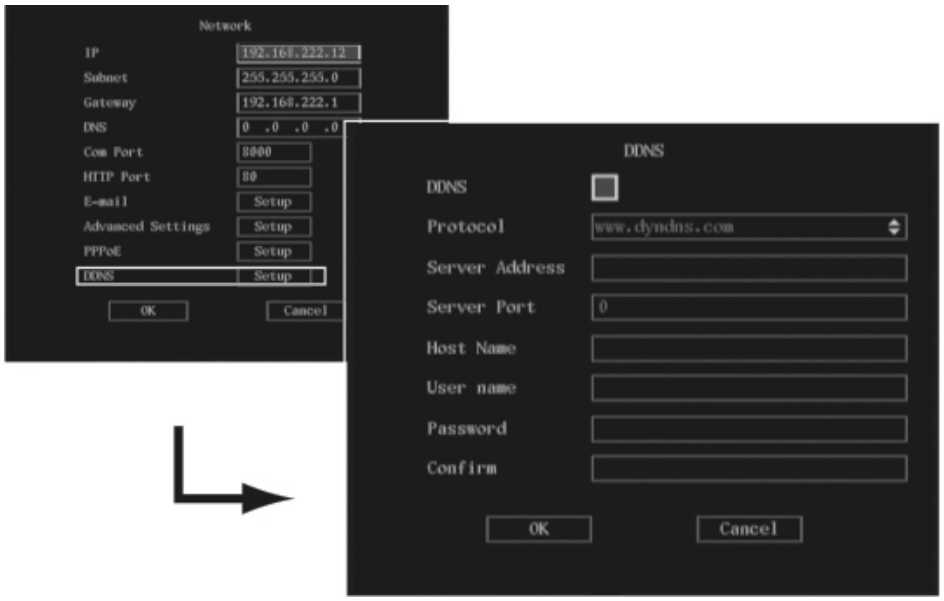
   Note: Press the Shift key in the on-screen alphanumeric keyboard to change the type of character (uppercase, lowercase, symbol, number). Alphanumeric information can only be entered using the mouse.
4. Select *Password* and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the password provided by the ISP.
5. Select *Confirm* and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, re-enter the password.
6. When all the changes have been done, select OK to return to the Network menu.

DDNS settings

Use this to select the DDNS service. The default DDNS protocol is www.dyndns.com.

To setup DDNS

1. In the Network menu go to the DDNS edit box and press the joystick for Enter, or left-click the mouse. The DDNS submenu appears.



2. Go to the *DDNS* check box and press the joystick for Enter, or left-click the mouse, to enable (✓) or to disable the option.
3. Go to the *Server Address* list box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the desired DDNS provider.
4. Go to *Server Port* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the desired port from the DDNS Service Provider.
5. Go to the *Host Name* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the DDNS host name.
6. Go to the *User Name* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the DDNS user name.
7. Go to the *Password* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, enter the Password for DDNS
8. Go to the *Confirm* edit box and press the joystick for Enter, or left-click the mouse. Using the on-screen alphanumeric keyboard, re-enter the password.
9. When all the changes have been done, select OK to accept the changes and return to the Networking menu.
10. When you have made all the changes required in the Network menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

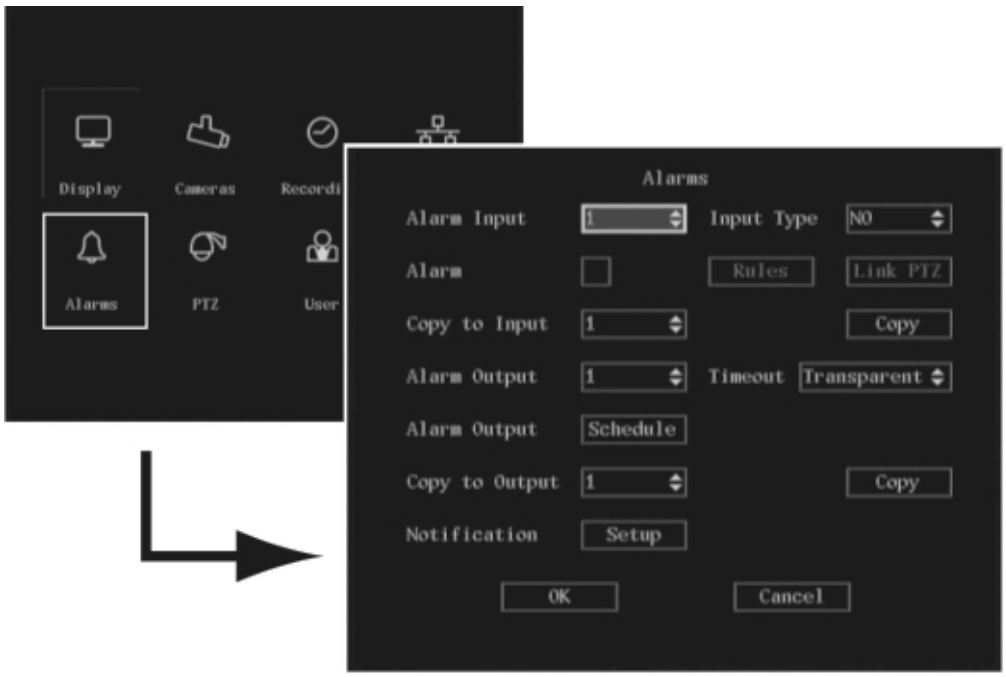
Alarm settings

Use the Alarms menu to setup how the TVR 40 responds when an alarm is triggered. You can select how the alarm settings should be handled such as:

- An external alarm input
- An internal alarm input
- Notification settings

The Alarms icon is located in the main menu. The following screen appears when you select the Alarms icon:

Figure 23: The Alarms menu



Alarm relay outputs

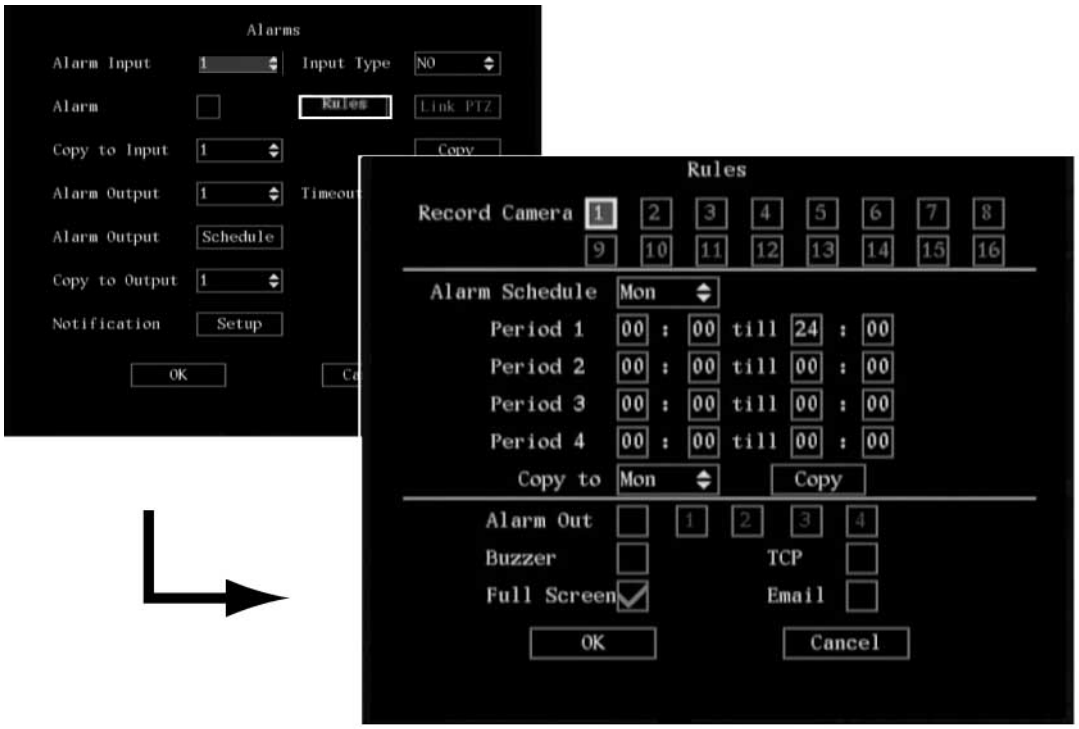
- The 4-channel TVR 40 has 4 external alarm inputs and 4 alarm relay outputs
- The 8-channel TVR 40 has 8 external alarm inputs and 4 alarm relay outputs
- The 16-channel TVR 40 has 16 external alarm inputs and 4 alarm relay outputs

When setting up the alarm relay output, you need to set the alarm output time delay. This delay is the time that the alarm output continues after the alarm itself has been deactivated. Consequently the actual alarm output time consists of the alarm input time and alarm output time delay.

External alarm input

To setup an external alarm input

1. In the Alarms menu go to the *Alarm Input* list box and select one of the alarm inputs listed.
2. Go to the *Input Type* list box and press F1 or left-click the mouse. Depending on the sensor type, select either NO or NC. Default is NO.
3. Select the *Alarm* check box and press Enter or left-click the mouse to enable (✓) the selected alarm input. If the alarm input is enabled, the Rules and PTZ Link setup buttons become activated.
4. **To set the alarm schedule**
   a. In the Alarms menu go to the *Rules* setup button and press Enter or left-click the mouse. The Alarm Input *Rules* submenu appears.



   b. Select the cameras from which you want to record an alarm input. Press Enter or left-click the mouse to enable (✓) or to disable the camera channel.

Caution: For a channel to be able to record an alarm, the recording option and the record type must first be enabled in the Record Schedule menu, such as Alarm or one of the other options available. See“To setup a camera’s recording schedule” on page 68 for further information.

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c. Under *Alarm Schedule* select the schedule for when the TVR 40 will respond to an external alarm.

Select the day of the week and then for *Period 1* enter the start and end time periods for the selected day. Each day can have up to four time periods.

Note: The time format is 24-hour.

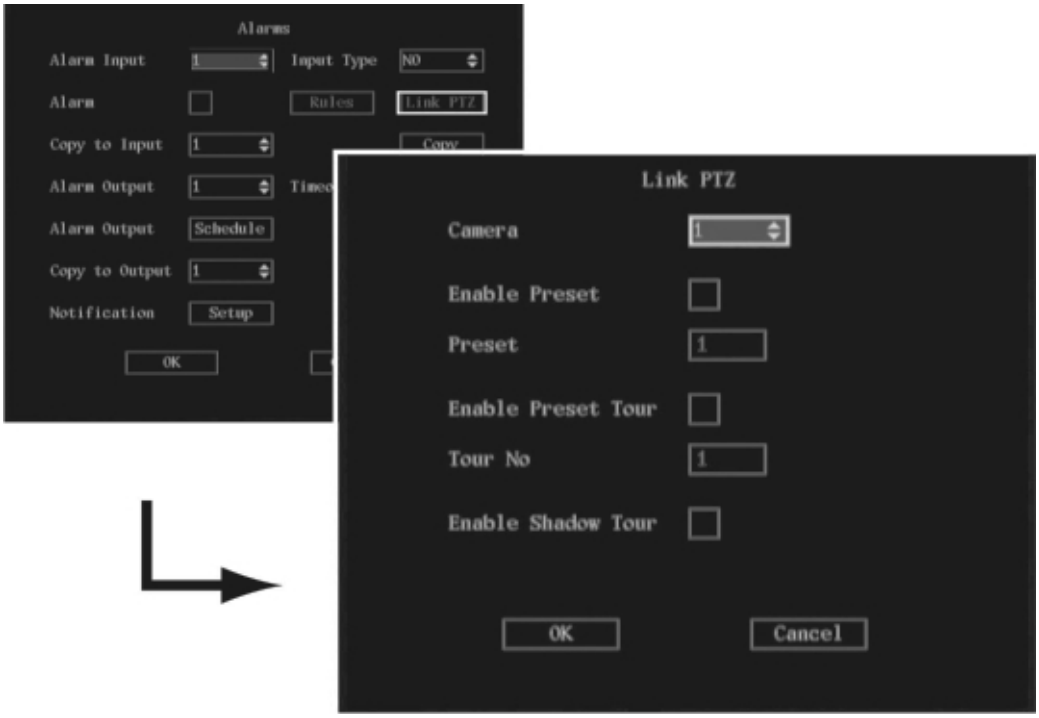
d. Select how the alarm should be indicated. Enable or disable each option by pressing Enter or left-clicking the mouse.

Alarm Out	When enabled, the Alarm Out is activated. Up to four alarm outputs can be enabled.
Buzzer	An audible alarm sounds.
TCP	The alarm information is sent to the remote IP (see section “Network settings” *on page 72*.
Full Screen	On Alarm channel will be displayed in full screen.
Email	The alarm information is sent to an Email address (see section “E-mail settings” on page 73.

e. Select OK and press the joystick for Enter to return to the Alarms menu, or select Cancel to abort and return to the Alarms menu.

5. **To set a PTZ link to the alarm**

a. In the Alarms menu go to the *Link PTZ* setup button and press Enter or left-click the mouse. The *Link PTZ* submenu appears.



b. Go to the *Camera* list box and select the camera for which you want to set the PTZ link when there is an alarm.

c. Select one of the PTZ options listed by pressing Enter or left-clicking the mouse to enable (✓) or to disable: Preset, Preset Tour, or Shadow Tour. When Preset or Preset

Tour is enabled, enter its pre-programmed number. See “PTZ settings” on page 85 for further information.

Note: Ensure that the PTZ you are using can support Preset, Preset Tour and Shadow Tour functions. An external alarm input can trigger one camera’s PTZ linkages.

d. Select OK and return to the Alarms menu.

6. **To copy settings to another external alarm input**

   a. In the Alarms menu go to the *Copy to Alarm In* list box and select one of the inputs listed.

   b. Go to the *Copy button* and press the joystick for Enter, or left-click the mouse. A message appears about the copying of the parameters. Select OK to accept.

7. Select OK and press the joystick for Enter to return to the Alarms menu, or select Cancel to abort and return to the Alarms menu.

8. When you have made all the changes required in the Alarms menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

External alarm output

You can configure how the alarm output should respond when an alarm in triggered. You can set, for example, when the alarm output can respond to an alarm. For example, if you do not want a siren to sound during the night.

To setup an external alarm output

1. In the Alarms menu go to the *Alarm Output* list box. Press the joystick for Enter, or left-click the mouse, to select one of the alarm outputs listed.

2. **To select the time delay for the alarm output**

   Go to the *Timeout* list box. Select the time delay for the alarm output from the list shown. The time delay options are:

   - Transparent mode (default): If there is an alarm input, there will be an alarm output.
   - Acknowledge: The alarm output will not stop until the alarm is manually acknowledged. See page “Manually acknowledging an alarm” on page 36 for further information.

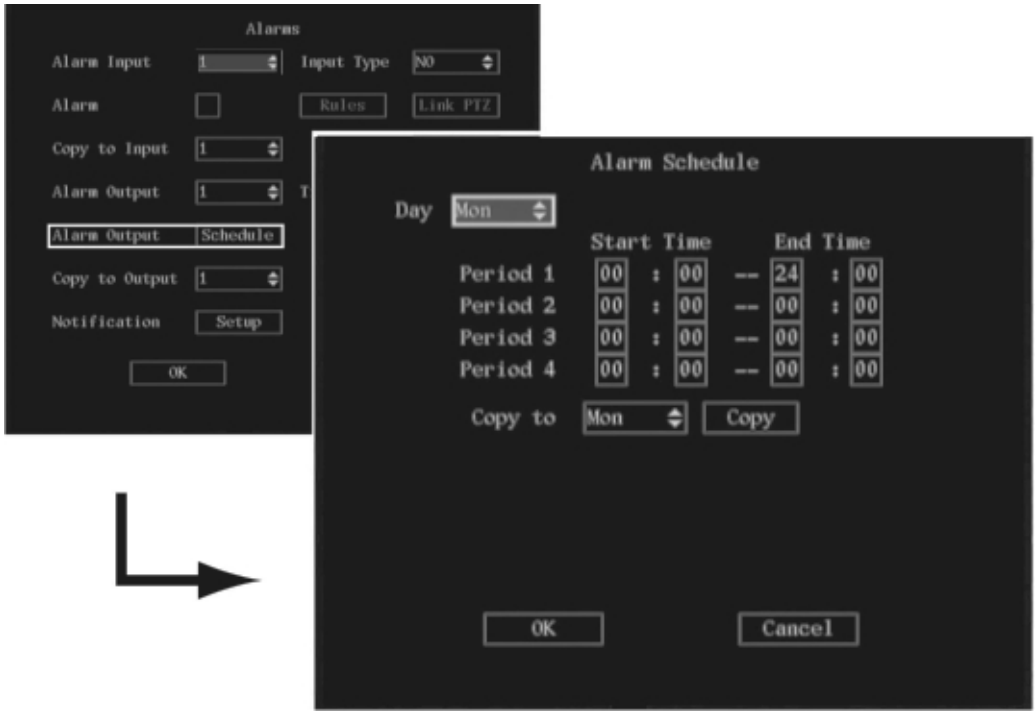
     Caution: An alarm can only be manually acknowledged locally. Do not select this option if the TVR 40 is controlled over a network.

   - 5 seconds
   - 10 seconds
   - 30 seconds
   - 1 minute
   - 2 minutes
   - 5 minutes

- 10 minutes

3. **To select when during a day an alarm output can respond**

   a. Go to the *Alarm Output* schedule button and press Enter or left-click the mouse. The Alarm Output Schedule submenu appears.



   b. In the Day list box select the day of the week. Using the numeric buttons on the front panel, or the on-screen numeric keyboard, enter the start and end time periods for the selected day for Period 1. Each day can have up to four time periods.

   Note: The time format is 24-hour.

   c. Repeat step b for each day of the week.

      If the desired times for this alarm output are identical to those of other days, select *Copy to* and select the day of the week to which you want to copy this schedule. Select *All* if the same schedule is used all week. Select Copy and press Enter twice.

   d. Select OK and press the joystick for Enter, or left-click the mouse, to return to the Alarms menu.

4. To copy the settings to another external alarm input, select *Copy to Output* in the Alarms menu. Select one of the outputs listed and press the joystick for Enter, or left-click the mouse. Go to *Copy* and press the joystick for Enter, or left-click the mouse. A message appears about copying the parameters. Select OK to accept.

5. When you have made all the changes required in the Alarms menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

Notification settings

For each alarm notification type, there are several ways to specify how to handle an alarm event.

To setup the notification settings

1. In the Alarms menu go to the *Notification* setup button and press the joystick for Enter, or left-click the mouse. The *Notification* submenu appears.
2. Go to the *Notify on* list box and select one of the options listed. See Table 12.

Table 12: List of notification options

Condition	When alarm occurs
HDD Full	Hard drives are full (only in *No overwrite*)
PAL/NTSC Mismatch	The input and output have a different video format
Illegal Access	Login failed on the unit Local as Remote
IP Address Conflict	Two devices on the network have the same IP address
Network Failure	Network connection is lost
Video Notification	A distorted video signal is connected to the video input

3. For each option on how to respond to triggers and alarm outputs press Enter or left-click the mouse to enable (✓) or to disable.
4. When completed, select OK to return to the Alarms menu.
5. When you have made all the changes required in the Alarms menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

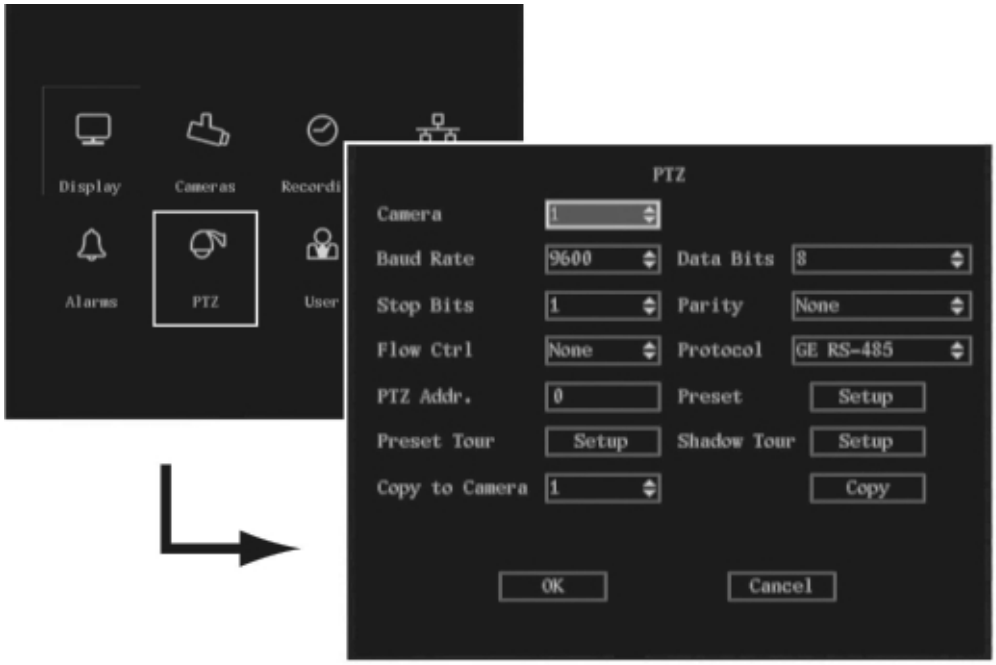
PTZ settings

You can control the PTZ functions of the cameras connected to the TVR 40. The PTZ menu allows you to setup the RS-485 and PTZ parameters to match your PTZ protocol such as:

- RS-485 parameters (Baud rate, data bits, stop bits, parity, and flow control)
- PTZ protocol
- PTZ address
- Preset parameters
- Preset tour function
- Shadow tour function

The PTZ icon is located in the main menu. The following screen appears when you select the PTZ icon:

Figure 24: The PTZ menu



Description of preset, preset tour, and shadow tour options

Preset	This 3-digit number represents the camera's position, zoom, focus, and iris. You can save up to 128 preset numbers. **Note**: The PTZ used must be able to support a preset function.
Preset tour	Each preset tour has several cruise points. A preset point has: • A preset number. • A dwell time. This is the time the PTZ camera stays at the preset number. • A dwell speed. This is the speed at which the PTZ moves to the preset number. You can save up to 16 sequences. **Note:** The PTZ used must be able to support a sequence function.
Shadow tour	The ShadowTour function remembers the PTZ movement track. **Note:** The PTZ used must be able to support a ShadowTour function.

PTZ settings

Use this menu to change PTZ settings. They can be changed in any order.

To define PTZ settings

1. In the PTZ menu go to the *Camera* list box and select the PTZ camera whose settings you want to change.
2. Set up the Baud Rate, Data Bits, Stop Bits, Parity, and Flow Ctrl. For each option in turn, select the required configuration as provided by the dome manufacturer. For example, the configuration for UTC cameras is: (default)
   - Baud rate – 9600
   - Data bits – 8
   - Stop bit – 1
   - Parity – None
   - Flow Crtl – None

3. Go to the *Protocol* list box and select one of the built-in PTZ protocols listed.

GE RS-485 ASCII	LG
GE RS-485 (default)	Infinova
VideoTec	HIKVISION
VCL SpeedDome	DM DynaColor
Techwin	DennardDome
EVI-D30	DeltaDome
Samsung	BBV
Siemens	Tyco AD
Philips 3	AD
Philips 2	Pelco D
Philips	Pelco P
Panasonic	

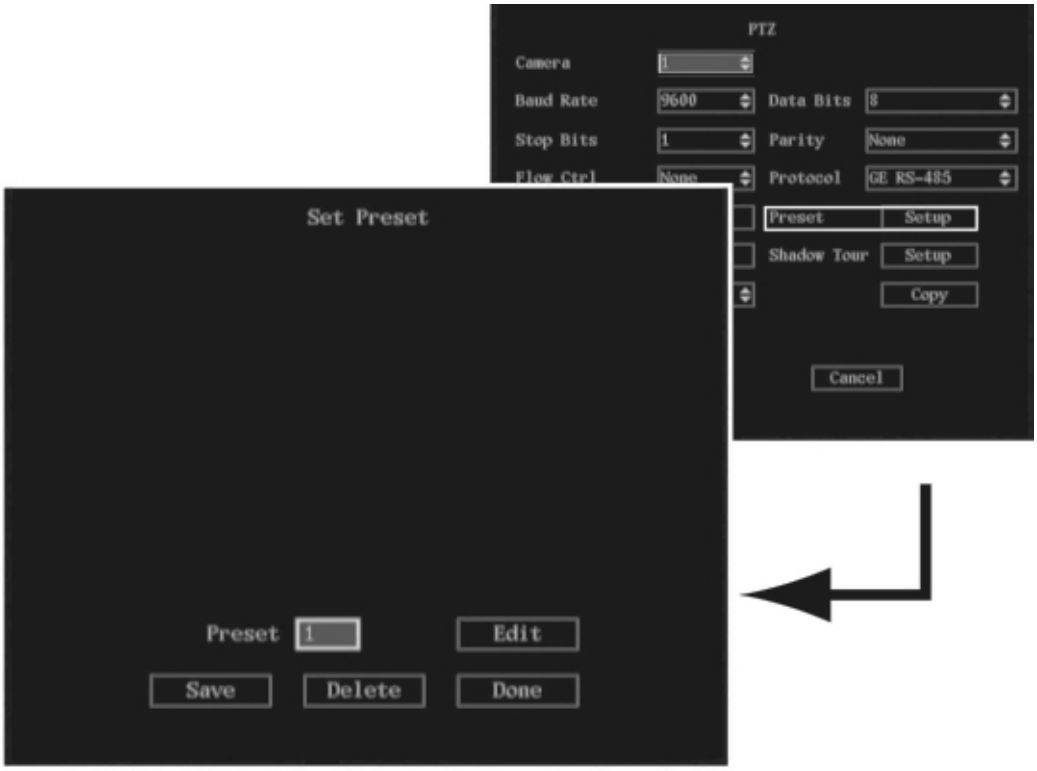
4. In the *PTZ Addr.* box enter a three-digit number for your PTZ address. It should correspond with the address used in the selected PTZ camera. Use the numeric buttons on the front panel, or the on-screen numeric keypad if using the mouse, to enter the number. If using the front panel, press the joystick for Enter.
5. When completed, select OK to return to the PTZ menu.
6. When you have made all the changes required in the Alarms menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

Using preset positions

The preset position is the function to program monitoring positions (preset positions) associated with position numbers. By entering the position number, you can move cameras automatically to the preset positions. You can set up to 128 preset numbers. A preset point is a three-digit number. This option is only available with cameras provided with the preset feature.

To set preset positions

1. In the PTZ menu go to the *Preset* setup button and press Enter or left-click the mouse. The Set Preset submenu appears.



2. Select the *Preset* setup button and press the joystick for Enter, or left-click the mouse. Enter your preset number (between 1 and 16) and press Enter, or left-click the mouse, to accept.
3. Using the arrow buttons IRIS+, IRIS-, FOCUS+, FOCUS-, and ZOOM adjust the PTZ to the desired position. Press Enter.
4. Select *Save* to save the preset number.
5. Repeat steps 2 to 5 for each preset number.
6. When all the preset numbers have been saved, select *Done* and press the joystick for Enter or left-click the mouse to return to the PTZ menu.

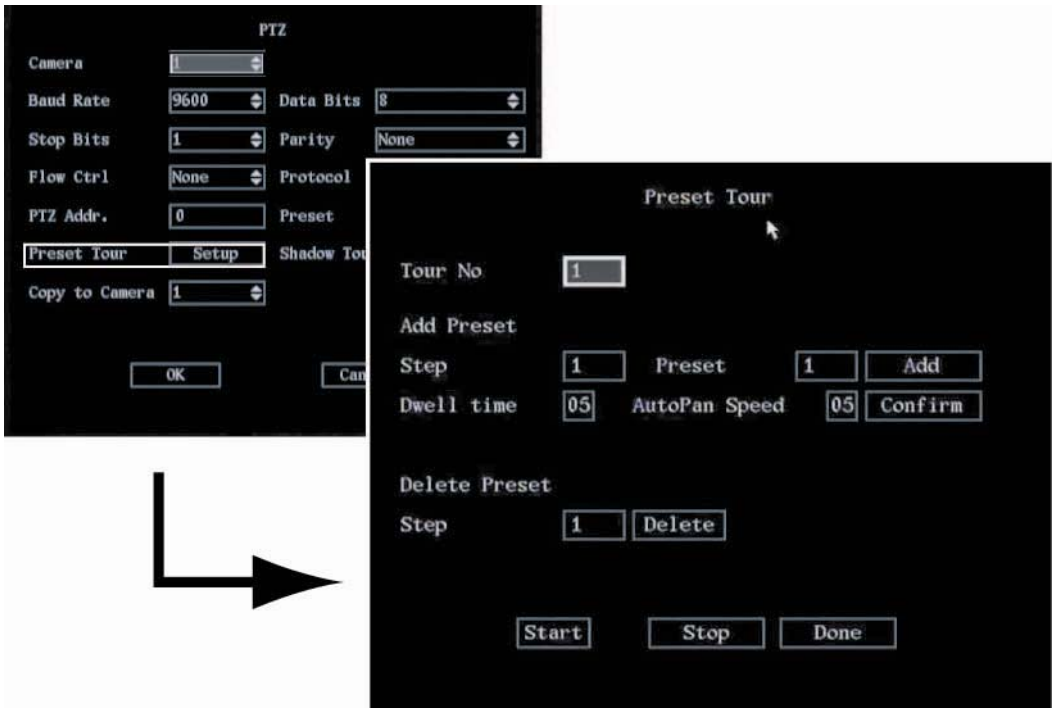
To delete preset settings

1. In the PTZ menu go to the *Preset* setup button and press Enter or left-click the mouse. The Set Preset submenu appears.
2. Select the *Preset* edit box and press the joystick for Enter, or left-click the mouse. Enter your preset number (between 1 and 16) and press Enter, or left-click the mouse, to accept.
3. Go to *Delete* and press Enter, or left-click the mouse, to delete the number.
4. When all the required preset numbers have been deleted, select *Done* and press the joystick for Enter, or left-click the mouse, to return to the PTZ menu.
5. When you have made all the changes required in the Alarms menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

To tour the preset positions

You can tour all preset positions in a camera. First you need to save the steps of preset positions to include in a tour.

1. In the PTZ menu go to the *Preset Tour* setup box and press the joystick for Enter, or left-click the mouse. The Sequence submenu appears.



2. Select the *Tour No.* edit box, and enter the sequence number you want to add or delete (between 1 and 16) . Press the joystick for Enter, or left-click the mouse.

   Each preset tour consists of steps. A step consists of a preset number, a dwell time, and an auto pan speed.

   Note: The PTZ camera used must be able to support a preset function.

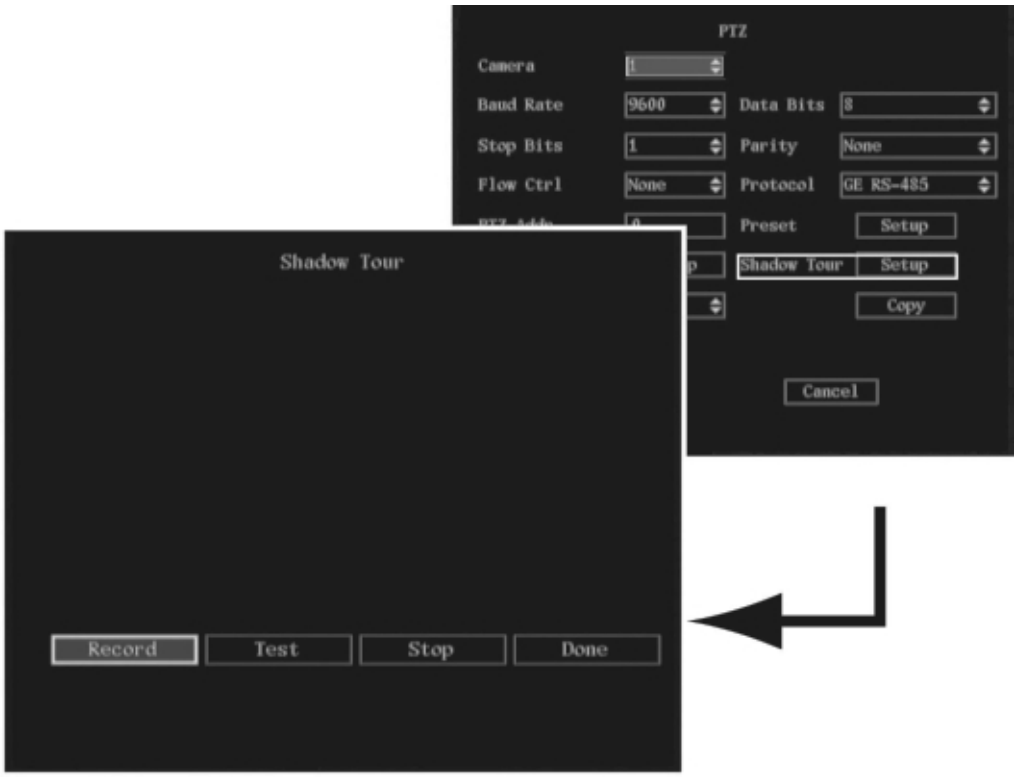
3. To add a step, go to *Step.* For each of the step settings (step number, preset number, dwell time number, and auto pan number) add the number and press Enter or left-click the mouse. When completed, select *Add*.
4. Select *Confirm* to save the step settings into the selected preset.
5. Check the sequence by selecting the *Start* button. The preset will then run. To stop the preset running, select *Stop*.
6. To delete a step, go to Delete Preset, Enter the step number you want to delete and select the *Delete* button.
7. When completed, select the *Done* button to return to the PTZ menu.

Using shadow tours

A shadow tour allows a preprogrammed motion of the camera.

To setup a shadow tour

1. In the PTZ menu go to the *Shadow Tour* setup button and press the joystick for Enter, or left-click the mouse. The Shadow Tour submenu appears.



2. Select the *Record* button and press Enter or left-click the mouse. The PTZ control appears on screen.

   Note: The PTZ camera used must be able to support a Shadow Tour function.

3. When you are satisfied with the PTZ track, press Enter or left-click the mouse to save it and to return to the Set Shadow Tour submenu.
4. Go to *Test* and press Enter or left-click the mouse. The PTZ track will be repeated until you select *Stop*.
5. Go to *Done* and press Enter or left-click the mouse to return to the PTZ menu.
6. To copy settings to another external alarm input:
   a. In the PTZ menu go to *Copy to Camera.* Select one of the outputs listed.
   b. Go to Copy and press Enter or left-click the mouse.
7. When you have made all the changes required in the PTZ menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

User settings

This section describes how to:

- Change user PINs
- Add new users
- Add or modify operational rights of users

The User icon is located in the main menu. The following screen appears when you select the User icon:

Figure 25: The user menu

Overview of users and PINs

The TVR 40 is shipped with three predefined users: Administrator, Manager, and Operator. The system administrator is the Admin user and can carry out all operations. Only the system administrator can manage users. The system administrator can create up to 13 additional individual users and allocate privileges to each of them.

See Table 13 below for the list of default users and their PINS.

Table 13: Default users and their PINs

Default user name	Default PIN
adminr	1234
manager	2222
operator	3333

The factory default User ID is “admin” and its PIN is “1234”. This factory default Administrator name cannot be changed. However, once you have completed the installation and setup you should change the admin PIN to protect against unauthorized access.

Caution: Keep the Admin PIN in a safe place. If you should forget it, you must return the TVR 40 unit to our service center to be reconfigured.

Note: You hear an audible warning when an incorrect user name or PIN is entered. After three incorrect entries, the unit returns to live mode.

When new users are added to the list, you can give them their own PINs or they can use a default PIN. All new users must be given user rights as these are not given automatically by the system. Users can be given local rights to do playback, remote playback, and view logs. You can also give them more extensive rights that cover both local and remote rights.

Local rights allow you to do local operations of the TVR 40, such as using the front panel and the IR remote control. Remote rights allow you to use the TVR 40 through the network. See Table 14 for the list of rights available.

Table 14: Description of user operational rights

Local rights	Description
Record	Manual start/stop recording
Edit Menu	Locally setup the TVR 40 settings
View Log	Locally view the log on TVR 40
System	Locally upgrade firmware, format HDD, reboot DVR and shut down the TVR 40, etc.
Remote rights	**Description**
PTZ	Remote PTZ control
Record	Remote manual start/stop recording
Playback	Remote playback, download the recorded files on TVR 40
Edit menu	Remote setup the TVR 40 settings
View Log	Remote views of the TVR 40 logs
System	Remote upgrade firmware, format HDD, reboot TVR 40, and shut down TVR 40, etc.
VOIP	Client can talk with TVR 40
Alarm	Remote control of the DVR alarm output

Preview	Network live mode
Local video play	Remote control of the TVR 40 video output
Com Control	TVR 40 RS-232 transparent channel function

Modifying a user's PIN

To modify a user's PIN

PINs are used to limit access to the TVR 40. Only the administrator can create or delete a PIN.

The same PIN can be used by several users. When you create a new user, the default PIN is 0000.

Caution: When you have completed the installation of the TVR 40 you must change the Administrator PIN. Only authorized users should be able to modify menu settings.

1. In the User menu select the user whose PIN you want to change. The user name is highlighted.

   Note: When a user's name is highlighted, the PIN and Confirm boxes display ******. If there are no symbols displayed in these boxes, the selected user does not have a PIN.**

2. Go to the *Set PIN* edit box.
3. Using the number buttons on the front panel, or the on-screen numeric keyboard, enter the new PIN. A PIN can have up to 16 numbers. When finished, press Enter or left-click the mouse to exit edit mode.
4. Go to the *Confirm* edit box and re-enter the new PIN. When finished, press Enter or left-click the mouse to exit edit mode.

   If the two PINs entered are identical, the PIN is saved and becomes effective immediately. However, if they are different a warning message appears. Press Enter to confirm. You will return to the PIN edit box and must re-enter the new PIN again.

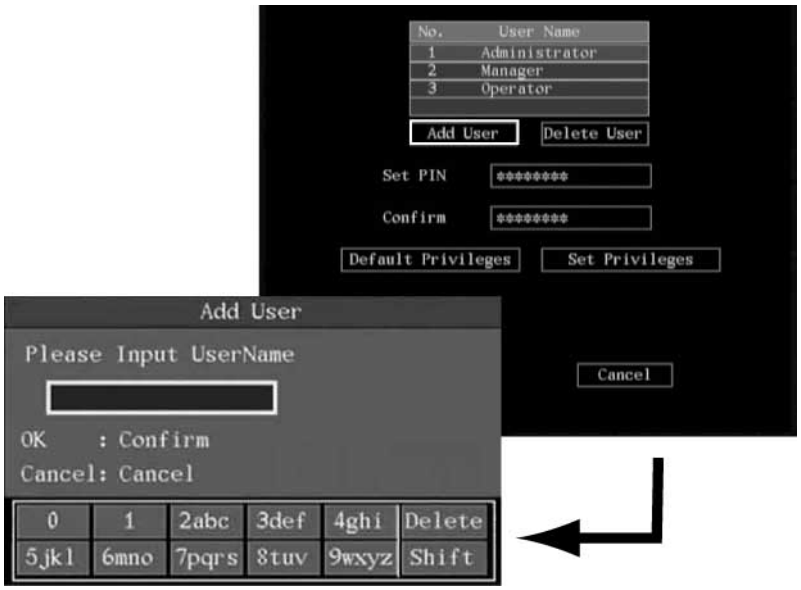
5. Go to OK and press Enter or left-click the mouse to accept the save and return to the main menu.

Adding a new user

Only the system administrator can add or delete users.

To add a new user

1. In the User menu go to the *Add User* button and press Enter or left-click the mouse. The Add pop-up dialog box appears. The cursor is in the User Name entry box.



Using the on-screen alphanumeric keyboard, enter the new user name and press Enter to confirm. The user menu appears with the new name listed.

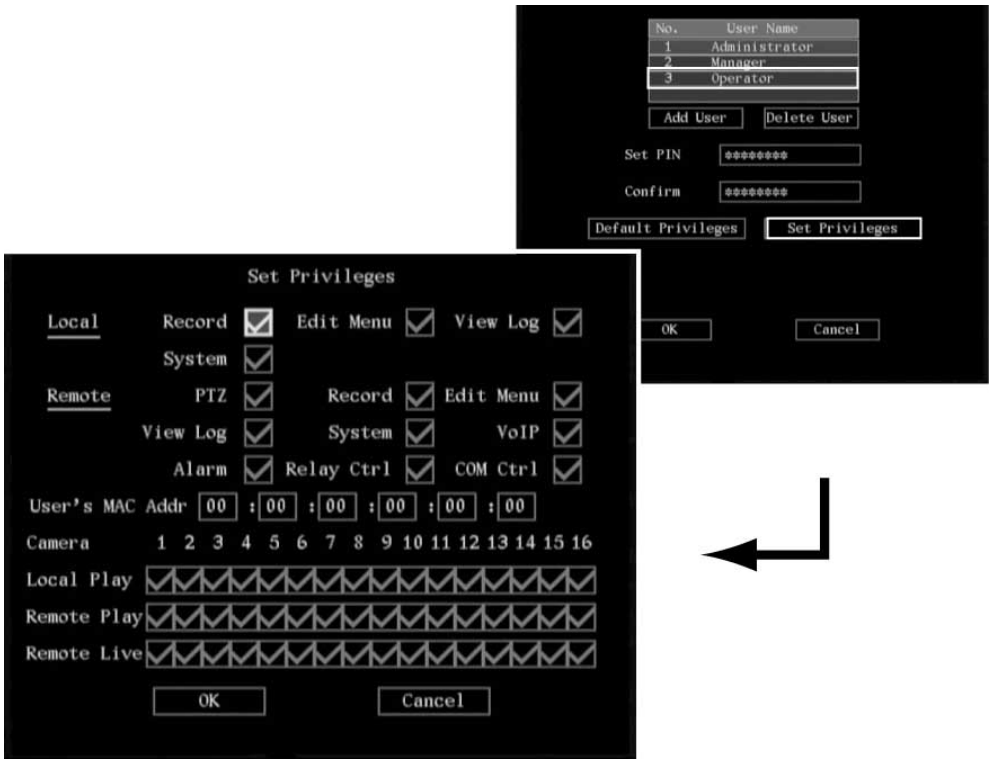
Caution: A new user has no operational rights. They must be allocated.

2. In the User menu go to OK. Press Enter or left-click the mouse to save the changes and return to the main menu.

Modifying operational rights

To add or modify user operational rights

1. In the User menu select the user you want to delete from the list.
2. Select the *Default Privileges* button and press Enter or left-click the mouse. The user is then allocated default rights. Default rights allow local playback, remote playback, and viewing logs.
3. To allocate more detailed user rights, select the *Set Privileges* button and press Enter or left-click the mouse. The Set Privileges submenu appears.



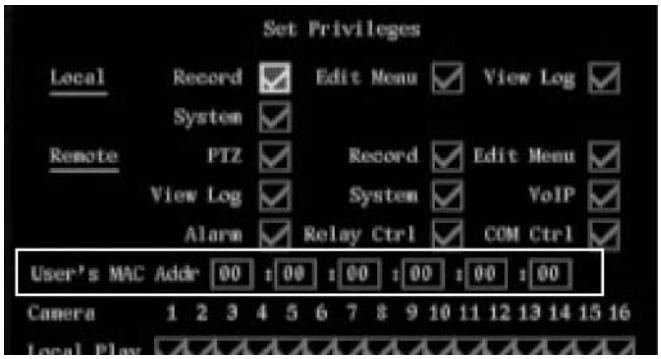
4. Users can be given local and remote rights. See Table 13 on page 92 for the list. Select each item that you want to assign to the user and press Enter or left-click the mouse to enable (✓) or disable.
5. Go to OK and press Enter or left-click the mouse to return to the user menu. Go to OK and press Enter or left-click the mouse to save the changes and return to the main menu.

Setting up a MAC

The MAC address is not the TVR 40 address but that of the PC which will access the TVR 40. If you setup a MAC address, only the PC with that MAC address can access the TVR 40.

To setup a MAC address

1. At the PC in DOS prompt use the " ipconfig " command to get the PC MAC address (6 bytes).
2. In the User menu select *Set Privileges* and press Enter or left-click the mouse. The Set Privileges submenu appears.



3. Go to the *User's MAC Addr.* and press Enter or left-click the mouse. Use the on-screen alpha numeric keyboard to enter t the MAC address.
4. Go to OK and press Enter or left-click the mouse to return to the User menu. Select OK and press Enter or left-click the mouse to save the changes and return to the main menu.

Deleting a user

Only the system administrator can add or delete users.

To delete a user

1. In the User menu select the user you want to delete.
2. Go to *Delete User* and press Enter or left-click the mouse. The Delete pop-up dialog box appears.
3. Go to OK and press Enter or left-click the mouse to delete the user, or select Cancel and press Enter to abort. You will return to the User menu.
4. Select OK to save the changes and return to the main menu.

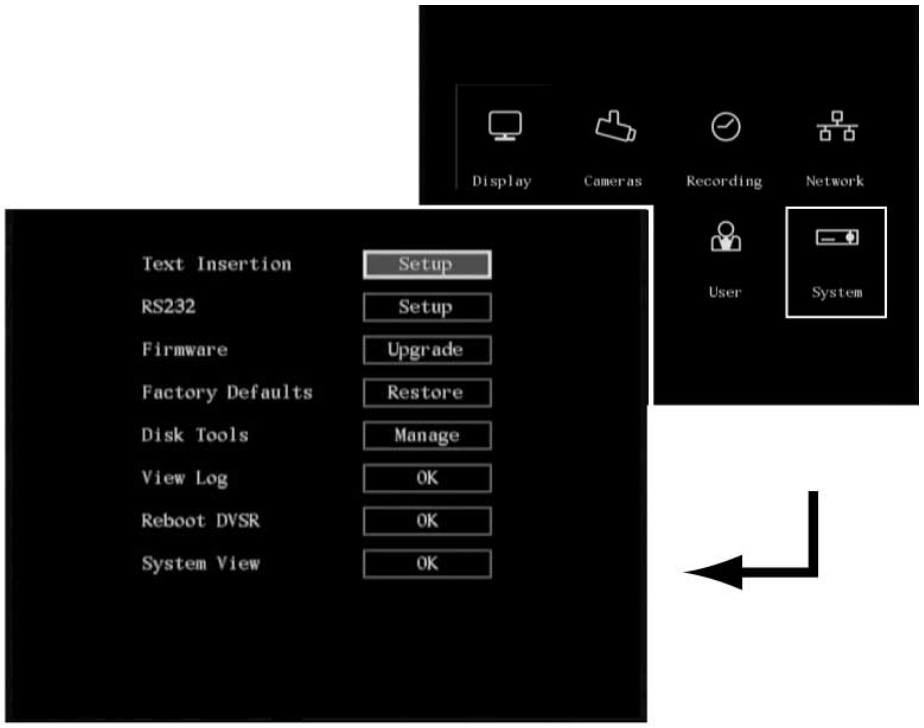
System settings

The System menu allows you to setup the following parameters such as:

- Handle transaction information
- Configure RS-232 settings
- Upgrade the firmware
- Restore factory defaults
- Reboot the TVR 40
- Manage HDD
- View logs
- Reboot the TVR 40
- View system information

The System icon is located in the main menu. The following screen appears when you select the System icon:

Figure 26: The system configuration screen



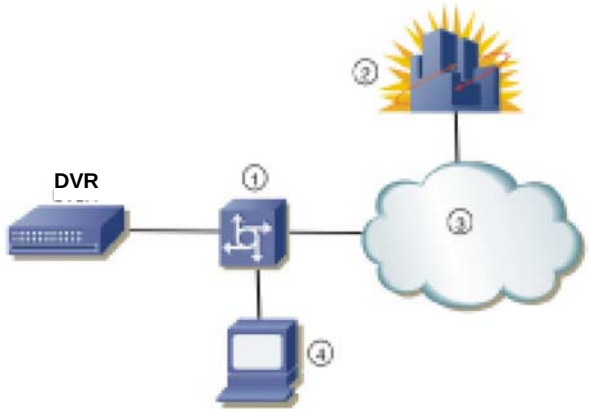
Capturing text insertions

The TVR 40 can actively obtain or passively receive text information from other devices linked through a network or a serial port. This information can then be overlaid on live video, recorded, and played back. The function is largely used for ATMs.

The following instructions describe how to setup the parameter for different links to ATMs and POS. ATM includes NCR, DIEBOLD, WINCOR-NIXDORF, Siemens, OLIVETTI, FUJITSU, Hitachi, etc and POS support through UTC ProBridge. The transaction types include query, withdraw, deposit, PIN modification and money transfer etc.

The TVR 40 permits the capture of four types of text insertions. See Table 15 on page 99.

Table 15: Text insertion capturing options

Option	Description
Network sniff	The text insertion is actively sniffed through the network, such as credit card numbers. To setup the TVR 40, you need to enter the following information: • IP address of ATM machine • Type of ATM machine • Start and end position, length and the content of the data message • Start and end position, and length of credit card number • Start and end position, and length of transaction type • Transaction type (for example, modify PIN, deposit, withdrawal) and code The network connection is as follows:  1. Switch; 2. Bank center; 3. Network; 4. ATM When the ATM machine sends the text insertion to the bank center, the DVR captures the data package through the network, and analyzes the data format. The TVR 40 will then overlay the corresponding text onto the live video.
Network receive	For future use.
Data received from ATM through the serial port	To setup the TVR 40 you need to enter the following information: • Type of ATM machine • Transaction type and code The network connection is as follows: The TVR 40 RS-232 must be setup in transparent channel mode (see page 82). Software must be run in the ATM to send the credit card number and transaction code to the TVR 40 through the RS-232 port.
Command received from the ATM through the serial port	To setup the TVR 40, you need to enter the following information: • Type of ATMS machine • Transaction type and code Software must be run in the ATM to send the command to the TVR 40 through the RS-232 port.

Handling transaction information

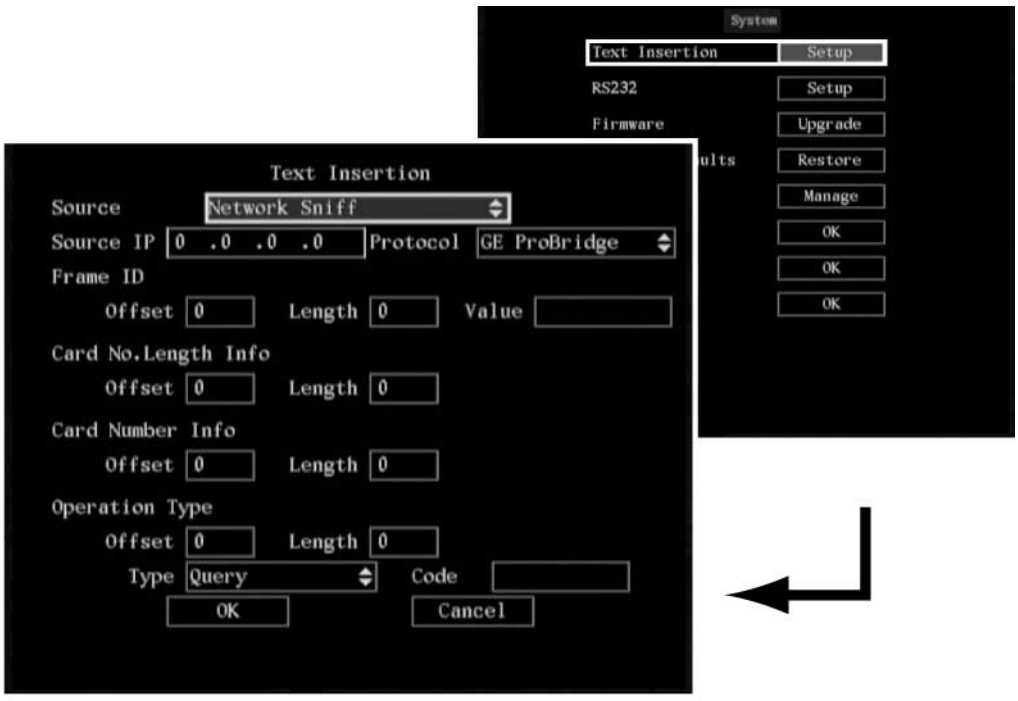
To setup how to handle transaction information

1. In the System menu go to the Text Insertion setup button and press Enter or left-click the mouse. The Text Insertion submenu appears.
2. Select one of the four text capture types from the drop-down list (see Table 15):
   - Network sniff
   - String from serial port
   - ATM CMD from serial port
   - Network receive

   Depending on the text capture type selected, the menu options listed will differ.

   a. **Network Sniff:** Go to each of the settings and press Enter or left-click the mouse to enter edit mode. Enter the values using the on-screen keyboard or the numeric buttons on the front panel. When finished, press Enter or left-click the mouse to exit edit mode.

   Select OK when completed and return to the System menu.

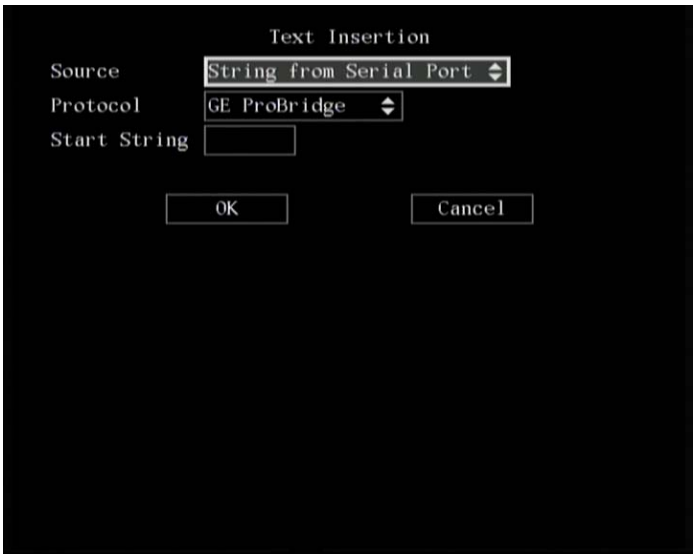


   b. **Network Receive**: Go to *Local Port* and press Enter or left-click the mouse to enter edit mode. Enter the values using the on-screen keyboard or the numeric buttons on the front panel. When finished, press Enter or left-click the mouse to exit edit mode.

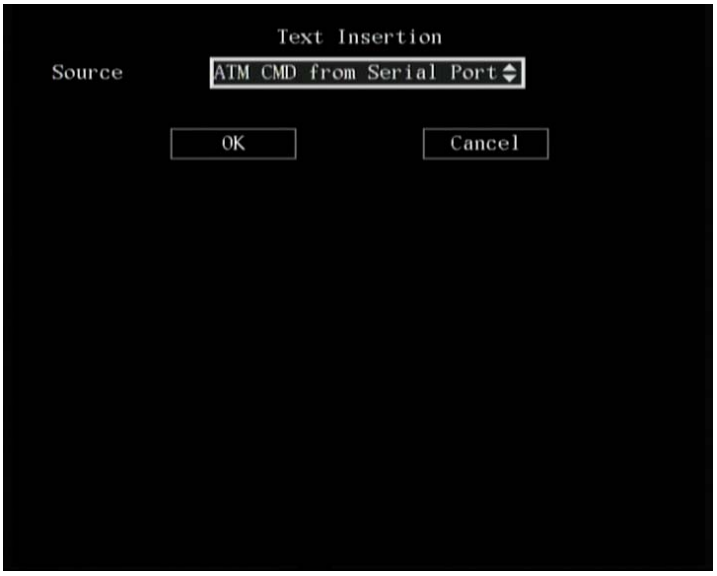
   Select OK when completed and return to the System menu.

   c. **Receive data sent by ATM through serial port:** Go to the *Protocol* list box and select the protocol parameter. UTC ProBridge is default. Enter the values using the on-screen keyboard or the numeric buttons on the front panel. When finished, press Enter or left-click the mouse to exit edit mode.

Select OK when completed and return to the System menu.



d. **Receive the command sent by ATM through serial port:** Select OK and return to the System menu.



3. When you have made all the changes required in the System menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

Configuring the RS-232

The following procedure shows how to change the RS-232 settings from the RS-232 submenu. The pre-populated default values are for UTC ProBridge. The RS-232 settings can be changed in any order.

To configure the RS-232

1. In the System menu go to the *RS-232* setup box and press Enter or left-click the mouse. The RS-232 submenu appears.

2. Enter the values for each of the RS-232 parameters listed: baud rate, data bits, stop bits, parity, flow control, and mode.

   There are two options for Mode: Console, and Text insert. For the console mode, connect the RS-232 port to a PC serial port for HyperTerminal control. For the text insert mode, connect serial devices such as ATM machines or UTC ProBridge for point-of-service (POS) systems.

   3. Select OK to accept the changes and return to the System menu.

3. When you have made all the changes required in the System menu, go to OK and press Enter or left-click the mouse to save all changes and return to the main menu.

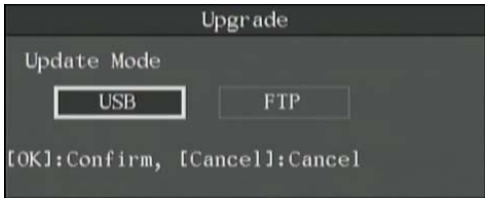
Upgrading the firmware

When you upgrade the firmware, you keep all your existing settings. Only the new features are added with their default settings.

To upgrade the firmware

Note: If upgrading using USB mode, disconnect the mouse beforehand. You cannot use the mouse if upgrading via the USB port.

1. In the System menu select to the *Firmware* upgrade button and press Enter or left-click the mouse. The Upgrade submenu appears.



2. Select either *FTP* or *USB* upgrade mode.
3. If you select *FTP* mode, the FTP Upgrade dialog box appears. Press Enter or left-click the mouse to confirm. The TVR 40 will connect with the FTP server via network and download the firmware file. Press Menu, or right-click the mouse, to cancel.

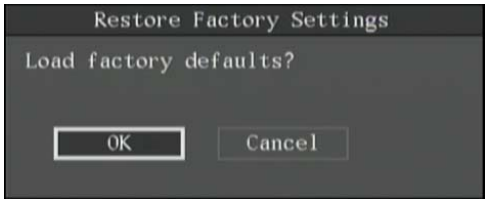
   If you select the USB mode, you must connect a USB flash memory to the TVR 40 and confirm that the firmware file is in the root directory. Press Enter or left-click the mouse to start the upgrade.

   Note: The firmware must be downloaded to the USB main directory, and the file named "digicap".
4. After successfully upgrading the firmware, press Menu or right-click the mouse to return to the main menu.
5. Press OK to reboot the TVR 40.

Restoring factory default settings

To restore factory default settings

1. In the System menu go to the *Factory Defaults* restore button and press Enter or left-click the mouse. The factory default dialog box appears.



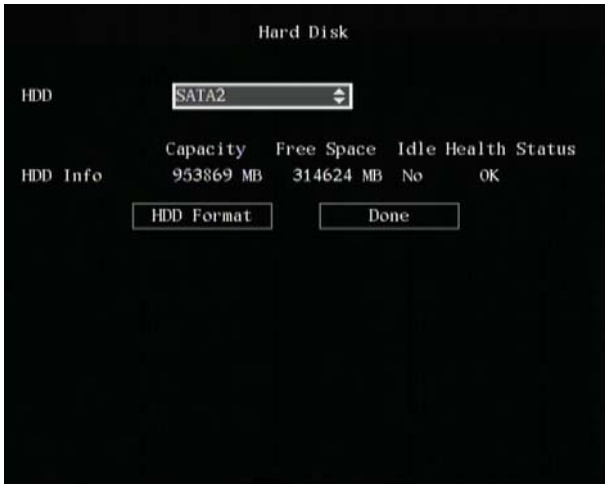
2. Select OK. The system will automatically reboot.

Caution: If during rebooting the TVR 40 makes a lot of noise, check that the video standard is correctly set to PAL (default) in the Display menu.

Managing the hard drive

To manage the HDD

1. In the System menu go to the *Disk Tools* manage button and press Enter or left-click the mouse. The Hard Disk menu appears.



2. **To check the HDD status**
   a. Go to the *HDD* list box and select the HDD required. The following information on the HDD appears underneath:
      - The capacity
      - The free space available
      - Idle
      - Health status
   b. When completed select *Done* to return to the System menu.
3. **To format the HDD**

Caution: Before formatting the HDD, stop all recording. Once formatting is completed, you must reboot TVR 40 as otherwise the unit will not function correctly.

   a. Go to the *HDD l*ist box and select the HDD required.
   b. Go to *HDD Format* button and press Enter or left-click the mouse. A dialog box appears showing that formatting is in progress.
   c. When formatting is completed, select *OK.* The Hard Disk menu appears.
   d. Select *Done* to return to the System menu.
4. Press Menu to save the changes and return to the main menu.

Viewing system logs

To view the logs recorded in the TVR 40

You can search the recorded logs by:

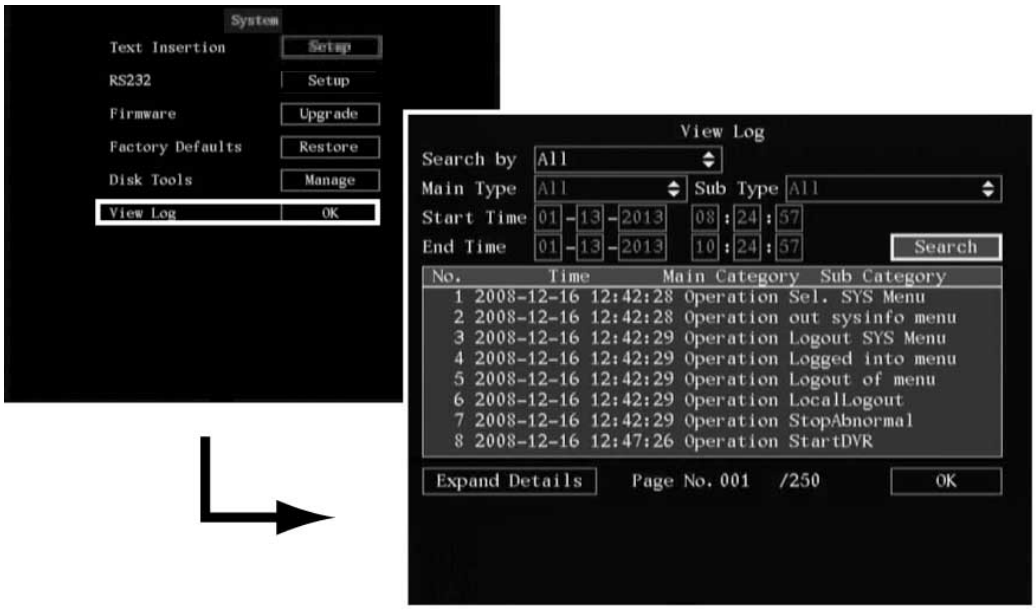
- **Options**. There are four log options: All, Category & Time, Time, and Category.
- **Main information types**. There are four main information types: All, Alarm, Notification, and Operation.
- **Sub information types**. There are several different types of sub information depending on the main type selected. See Table 16.

Table 16: Sub information types by main type

Main information types	Sub information types
All	All
Alarm	All, ViewTamper Stop,ViewTamper Start, MotDetStop, MotDetStart, Alarm Out, Alarm In
Notification	All, DCDLost, IP Conflict, HardDiskFull, HardDiskError, IllegalAccess
Operation	All, SaveToSATADISK, EndSaveToSATADISK, EndSaveToIDECDRW, EndSaveToUSBCDRW, EndSaveToUSBHD, EndSaveToUSBDISKK, change, Altered, File End Time, File Start Time, Net PTZ, Net Time Play, Net File Play, Net Upgrade, BiComStop, BiComStart, Net Reboot, Alert Off, Alert On, NetGetStatus, NetGetConfig, NetGetPara, NetStopTrans, NetStartTrans, NetStopRecord, NetLogout, NetLogin, LocalFileCopy, LocalUpgrade, Panel Set Time, PanelPTZ, LocalStopRec, LocalStartRec, PanelTimePaly, PanelConfig, PanelLogout, PanelLogin, AbnormalShut, Shutdown, PowerOn

- **Date and time**. Logs can be searched by date as well as start and end recording times.

1. In the System menu select the *View Log* edit box and press Enter or left-click the mouse. The View Log menu appears.



2. **To view the default log options**

   In the *View log* menu press Enter or left-click the mouse. The results are shown in the window underneath.

3. **To setup the search by type**

   a. In the *View Log* menu go to the *Search by* list box and select one of the four options: All, Category & Time, Time, and Category.

      Note: If the options *All* or *Time* are selected, the main and sub type options are not be available.

   b. Go to the *Main Type* list box and select one of the types listed.

   c. Go to the *Sub Type* list box and select one of the types listed.

4. **To setup the search by date and time**

   a. In the *View Log* menu go to the *Start Time* edit box and press Enter or left-click the mouse to enter edit mode. Enter the values using the on-screen keyboard or the numeric buttons on the front panel. When finished, press Enter or left-click the mouse to exit edit mode.

      Note: Time is written in the 24-hour format.

   b. Go to the *End Time* edit box and press Enter or left-click the mouse to enter edit mode. Enter the values using the on-screen keyboard or the numeric buttons on the front panel. When finished, press Enter or left-click the mouse to exit edit mode.

5. **To search for the logs**

   Go to the *Search Log* button and press Enter or left-click the mouse to start the search.

   When the search is completed, the TVR 40 will list all matched log information in the window underneath.

6. If you want to see further information on the logs, such as local or remote users, select *Expand Details*. Select again to return to the original log window.

7. Go to OK and press Enter or left-click the mouse to return to the System menu.

8. Press OK to save the changes and return to the main menu.

Rebooting the TVR 40

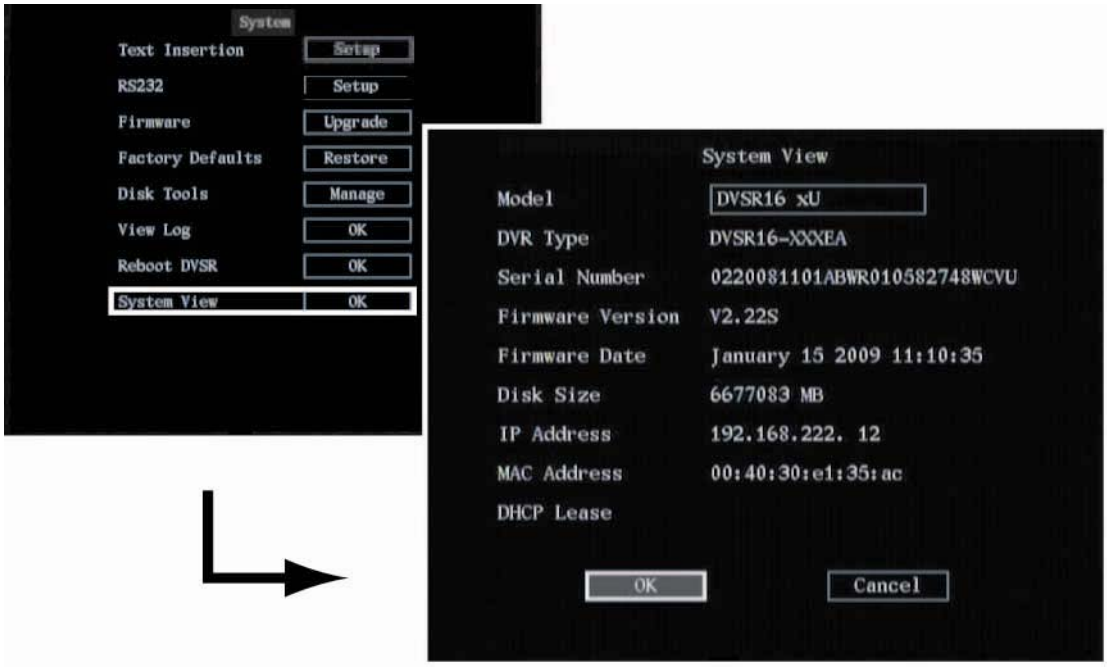
To reboot the TVR 40

1. In the System menu go to the *Reboot TVR* edit box and press Enter or left-click the mouse. The system immediately reboots.

Viewing system information

To view TVR 40 system information

1. In the System menu go to the *System View* edit box and press Enter or left-click the mouse. The System View menu appears.



2. Go to OK and press Enter or left-click the mouse to return to the System menu.
3. Press Menu or right-click the mouse to return to the main menu.

Troubleshooting and support

This section provides information to help you diagnose and solve various problems that may arise while configuring or using your UTC product and offers technical support contacts in case you need assistance.

Troubleshooting your system

Problem	Possible reasons
POWER LED on front panel does not light up when the TVR 40 is turned on, and the fan does not work.	• TVR 40 is not connected to the power supply. Check that the power cable is plugged into the TVR 40. • TVR 40 is not switched on. Check that the power switch on the back panel is switched on.
The power cable is plugged in and power is switched on. The POWER LED on front panel is green but fan does not work.	• Front panel on/off power button is not working. • The fan is broken. The TVR 40 must be sent in for repair. Please contact your local supplier.
The TVR 40 continuously reboots after start up, and makes an audible alarm every 10 seconds.	• The wrong firmware has been used in the upgrade. • TVR 40 has hardware problems and must be sent in for repair. Please contact your local supplier.
When using V_{OUT} no images appear on the monitor when TVR 40 is turned on.	• The cable connected to the monitor is damaged. Check the cable. • TVR 40 has hardware problems. Please contact your local supplier.
The system cannot find the hard disk in reboot process.	• The HDD cable is damaged. • The power cable of the hard disk is not connected. • The HDD is damaged. Please contact your local supplier.
No response from the HyperTerminal interface.	• The Baud rates of the TVR 40 and PC are different. • RS-232 cable is damaged. • The serial port of the PC is damaged. • RS-232 port of the DVR is damaged. Please contact your local supplier.
TVR 40 cannot control the PTZ through the RS-485 port.	• RS-485 cable is incorrectly connected or is damaged. Check the cable. • PTZ parameter error. PTZ settings are incorrect and should be checked. • RS-485 port of TVR 40 is damaged. Please contact your local supplier.
Client software cannot view the TVR 40 live image.	• Network error. Please contact your IT manager. • DVR incorrectly configured (for example, incorrect IP, port number, username or PIN, etc). • Old version of client software. Please contact your local supplier.

Contacting technical support

For help installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, contact us during business hours (Monday through Friday, excluding holidays).

Note: Be ready at the equipment before calling for technical support.

Table 17: Technical support

Europe, Middle East, and Africa	
W	Select *Contact Us* at www.utcfssecurityproducts.eu
North America	
T	+1 855.286.8889
E	techsupport@interlogix.com
Australia	
E	security.tech.support@interlogix.com.au

Appendix 1: Specifications

Video compression	MPEG-4AVC (H.264)
Live resolution	PAL: 704 x 576, NTSC: 704 x 480
Playback resolution	QCIF/CIF/2CIF/4CIF
Video input	4/8/16
Video input interface	BNC (Electrical Level: 1.0 Vp-p, resistance: 75 Ω)
Video output	Monitor A: One monitor A multiscreen output, BNC connector, NTSC/EIA or PAL/CCIR compatible VGA: Same display content as monitor A Monitor B: One monitor B multiscreen output, BNC connector, NTSC/EIA or PAL/CCIR compatible
Frame rate	PAL: 0.0625—25FPS, NTSC: 0.0625—30FPS
Stream type	Video/Video&Audio
Max bit rate	32 Kbps-2 Mbps, self-defined
Audio input	4/8/16
Audio input interface	BNC (Linear Electrical Level, Resistance: 1 KΩ)
Audio output	1 channel, BNC (Linear Electrical Level, Resistance: 600 Ω)
Audio compression	Ogg Vorbis
Audio compression rate	16 Kbps
Bi-directional audio	1 channel, BNC (Linear electrical level, resistance: 1 kΩ)
Communication interface	1 RS-232 serial port: RJ45 1 RJ-485 : Screw terminal strip 1 Network port: 10M/100M self-adaptive Ethernet interface 1 e-SATA port 1 USB port
VGA interface	1 VGA interface (max. 1280*1024@60 Hz)
External alarm in	4, 8 or 16 Alarm inputs: Programmable NO/NC
Alarm output	4 Alarm outputs: Form C alarm relay
Power supply	90 to 135 VAC or 180 to 265 VAC, 47 to 63 Hz
Power consumption	20 to 42 W (without HDD)
Operating temperature	-10 to +50°C
Relative humidity	10 to 90%
Size	Standard 450 x 450 x 95 mm
Weight	≤8.5 kg (without HDD)

Note: PAL: 176 x 144 (QCIF), 352 x 288 (CIF), 704 x 288 (2CIF), 704 x 576 (4CIF);

NTSC: 176 x 120 (QCIF), 352 x 240 (CIF), 704 x 240 (2CIF), 704 x 480 (4CIF).

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